TO-1390 (Modified) 1-98) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

ATTORNEY'S DOCKET NUMBER	
147-211P	
U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR)	
NEW 09/647377	

INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED
PCT/EP99/02055	March 26, 1999	March 27, 1998

TITLE OF INVENTION

NUCLEIC ACID MOLECULES ENCODING PROTEINS WHICH INFLUENCE BONE DEVELOPMENT

APPLICANT(S) FOR DO/EO/US

ROSENTHAL, André; RUMP, Andreas; HESS, Jochen; AIGNER, Thomas; WIRTH, Thomas

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
   a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☒ has been transmitted by the International Bureau.
   c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☐ A copy of the International Search Report (PCT/ISA/210).
8. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
   a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☐ have been transmitted by the International Bureau.
   c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
   d. ☒ have not been made and will not be made.
9. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
10. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
11. ☐ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).

Items 13 to 20 below concern document(s) or information included:

13. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☒ A **FIRST** preliminary amendment.
16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
17. ☐ A substitute specification.
18. ☐ A change of power of attorney and/or address letter.
19. ☒ Certificate of Mailing by Express Mail
20. ☒ Other items or information:

Twenty-two (22) sheets of formal drawings
Sequence Listing (165 pages)
Sequence Listing on diskette

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR	INTERNATIONAL APPLICATION NO.	ATTORNEY'S DOCKET NUMBER
09/647377	PCT/EP99/02055	147-211P

21. The following fees are submitted:.

BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) :

		CALCULATIONS PTO USE ONLY
☐	Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2) paid to USPTO and International Search Report not prepared by the EPO or JPO **$970.00**	
☒	International preliminary examination fee (37 CFR 1.482) not paid to USPTO but Internation Search Report prepared by the EPO or JPO **$840.00**	
☐	International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO **$690.00**	
☐	International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4) **$670.00**	
☐	International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4) **$96.00**	
	ENTER APPROPRIATE BASIC FEE AMOUNT =	**$840.00**
	Surcharge of **$130.00** for furnishing the oath or declaration later than ☐ 20 ☒ 30 months from the earliest claimed priority date (37 CFR 1.492 (e)).	**$130.00**

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	
Total claims	73 - 20 =	53	x $18.00	**$954.00**
Independent claims	1 - 3 =	0	x $78.00	**$0.00**
Multiple Dependent Claims **(check if applicable)**.			☒	**$260.00**
	TOTAL OF ABOVE CALCULATIONS =			**$2,184.00**
	Reduction of 1/2 for filing by small entity, if applicable. Verified Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28) **(check if applicable)**. ☐			**$0.00**
	SUBTOTAL =			**$2,184.00**
	Processing fee of **$130.00** for furnishing the English translation later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492 (f)). +			**$0.00**
	TOTAL NATIONAL FEE =			**$2,184.00**
	Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) **(check if applicable).** ☐			**$0.00**
	TOTAL FEES ENCLOSED =			**$2,184.00**
			Amount to be: refunded	$
			charged	$

☒ A check in the amount of **$2,184.00** to cover the above fees is enclosed.

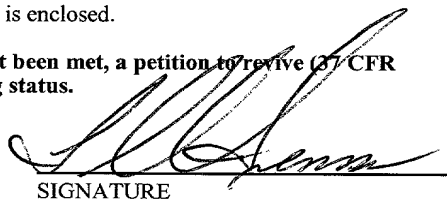
☐ Please charge my Deposit Account No. in the amount of to cover the above fees.
A duplicate copy of this sheet is enclosed.

☒ The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. **02-2448** A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

BIRCH, STEWART, KOLASCH & BIRCH, LLP
P.O. Box 747
Falls Church, VA 22040
714-708-8555



SIGNATURE

Leonard R. Svensson
NAME

30,330
REGISTRATION NUMBER

27 September 2000
DATE

BOX SEQUENCE

PATENT
0147-0211P

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant:	ROSENTHAL, Andre et al.	Conf.:	UNASSIGNED
Appl. No.:	09/647,377	Group:	UNASSIGNED
Filed:	September 27, 2001	Examiner:	UNASSIGNED

For: NUCLEIC ACID MOLECULES ENCODING PROTEINS WHICH INFLUENCE BONE DEVELOPMENT

AMENDMENT

Assistant Commissioner for Patents
Washington, DC 20231

August 27, 2001
(Monday)

Sir:

In response to the U.S. Patent Office Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Disclosures dated May 25, 2001, the period for response having been extended one (1) month to August 25, 2001, the following amendments and remarks are respectfully submitted in connection with the above-identified application.

IN THE SPECIFICATION:

Please replace the paragraph beginning on page 10, line 10 with the following amended paragraph:

It is particularly preferred for the protein encoded by the nucleic acid molecule of the invention to comprise at least one of the following two consensus sequences.

Consensus 1:

EFMLLANXXVAXXIXXXFPXXALLRRHXXP (SEQ ID NO:22)

Consensus 2:

HZALNVXXZTHFTSPIRRZXDVIVHRLLAAALGY (SEQ ID NO:23)

Moreover, the present invention relates to nucleic acid molecules, the sequence of which deviates from the sequence of one of the above-described nucleic acid molecules because of the degeneracy of the genetic code.

Please replace the description of Figure 2 on page 16 with the following amended description:

Figure 2 shows the first pursued sequencing strategy for sequencing the murine and human LOBO gene (SEQ ID NOS:24-34). As at first only the 3'-end of the gene was sequenced, the exons starting at the 3'-end were numbered 1, 2, 3 etc. Three murine wildtype cosmid clones (middle) were sequenced, two plasmid clones were sequenced from the transgenic LOBO mouse (top) and a human P1-clone (bottom) was sequenced. The arrows denote the exons known for the time being. Seven exons were located on the genomic sequence, the eighth exon at first only existed on an EST clone. The plasmid clones from the transgenic LOBO mouse (top) contain the introduced artificial gene and the adjacent murine sequences. These murine sequences are identical to the corresponding sequences of the wildtype mouse except for 10 base pairs, which have been replaced in the transgenic mouse by the artificial gene.

Please replace the Sequence Listing filed September 27, 2000 located immediately after the abstract with Substitute Sequence Listing enclosed herewith on two (2) CD-Rs in place of the paper copy.

REMARKS

Enclosed herewith in full compliance to 37 C.F.R. §§1.821-1.825 is a Sequence Listing submitted on two (2) identical CD-Rs under 37 C.F.R. §1.821(c) in place of the paper copy. The computer readable form of the Sequence Listing is submitted herewith on one (1) additional CD-R as required by §1.821(e). These three (3) identical CD-R copies of the Sequence Listing, file "0147-0211P.ST25.txt", in no way introduce new matter into the specification.

The substitute Sequence Listing now contains the sequences disclosed in the Specification and Figure 2 that were not made part of the original Sequence Listing. The amendments to the Specification were made to reference these sequences by their SEQ ID NOS. These amendments are editorial in nature and do not constitute new matter.

Entry of the above amendments is earnestly solicited. An early and favorable first action on the merits is earnestly solicited.

Pursuant to C.F.R. §§1.17 and 1.136(a), the Applicant respectfully petitions for a one (1) month extension of time for filing a response in connection with the present application and the required fee of $55.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By #32,568
for Leonard R. Svensson, #30,330

P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000

LRS/KW
0147-0211P

Attachments: Two (2) CD-Rs as the Paper copy of the Sequence Listing
One (1) CD-R as the Computer Readable form of the Sequence Listing
Copy of Notice to Comply
Version with Markings to Show Changes

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The paragraph beginning on page 10, line 10 has been amended as follows:

It is particularly preferred for the protein encoded by the nucleic acid molecule of the invention to comprise at least one of the following two consensus sequences.

Consensus 1:

EFMLLANXXVAXXIXXXFPXXALLRRHXXP (SEQ ID NO:22)

Consensus 2:

HZALNVXXZTHFTSPIRRZXDVIVHRLLAAALGY (SEQ ID NO:23)

Moreover, the present invention relates to nucleic acid molecules, the sequence of which deviates from the sequence of one of the above-described nucleic acid molecules because of the degeneracy of the genetic code.

The description of Figure 2 on page 16 has been amended as follows:

Figure 2 shows the first pursued sequencing strategy for sequencing the murine and human LOBO gene (SEQ ID NOS:24-34). As at first only the 3'-end of the gene was sequenced, the exons starting at the 3'-end were numbered 1, 2, 3 etc. Three murine wildtype cosmid clones (middle) were sequenced, two plasmid clones were sequenced from the transgenic LOBO mouse (top) and a human P1-clone (bottom) was sequenced. The arrows denote the exons known for the time being. Seven exons were located on the genomic sequence, the eighth exon at first only existed on an EST clone. The plasmid clones from the transgenic LOBO mouse (top) contain the introduced artificial gene and the adjacent murine sequences. These murine sequences are identical to the corresponding sequences of the wildtype mouse except for 10 base pairs, which have been replaced in the transgenic mouse by the artificial gene.

PATENT
147-211P

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant:	Andre ROSENTHAL et al.		
Int'l. Appl. No.:	PCT/EP99/02055		
Appl. No.:	NEW	Group:	Unassigned
Filed:	September 27, 2000	Examiner:	UNASSIGNED
For:	NUCLEIC ACID MOLECULES ENCODING PROTEINS WHICH INFLUENCE BONE DEVELOPMENT		

PRELIMINARY AMENDMENT

BOX PATENT APPLICATION
Assistant Commissioner for Patents
Washington, DC 20231

September 27, 2000

Sir:

The following Preliminary Amendments and Remarks are respectfully submitted in connection with the above-identified application.

AMENDMENTS

IN THE SPECIFICATION:

Please amend the specification as follows:

Before line 1, insert --This application is the national phase under 35 U.S.C. § 371 of PCT International Application No. PCT/EP99/02055 which has an International filing date of March 26, 1999, which designated the United States of America.--

IN THE CLAIMS:

Please amend the claims as follows:

7. (Amended) A host cell transformed by a nucleic acid molecule according to

any one of claims 1 to 4 [or a vector according to claim 5 or 6].

9. (Amended) A protein encoded by a nucleic acid molecule according to claim 1 [or obtainable by the method of claim 8].

12. (Amended) A diagnostic composition containing a nucleic acid molecule according to any one of claim 1 to 4, [a vector according to claim 5 or 6,] a protein according to claim 9, an antibody according to claim 10 and/or a nucleic acid molecule according to claim 11.

13. (Amended) A pharmaceutical composition containing a nucleic acid molecule according to any one of claims 1 to 4, [a vector according to claim 5 or 6,] a protein according to claim 9, an antibody according to claim 10 and/or a nucleic acid molecule according to claim 11 and optionally a pharmaceutically acceptable carrier.

14. (Amended) A method for preparing a transgenic non-human animal, wherein a nucleic acid molecule according to claim 1 [or a vector according to claim 5 or 6] is inserted into a germ cell, an embryonic cell, an egg cell, or a cell derived therefrom, and a transgenic animal is produced from the thus transformed cell.

15. (Amended) A transgenic, non-human animal which is transformed with a nucleic acid molecule according to claim 1 [or a vector according to claim 5 or 6 or which is obtainable by a method according to claim 14].

Please add the following claims:

--**20.** A host cell transformed by a vector according to claim 5.--

--**21**. A host cell transformed by a vector according to claim 6.--

--**22.** A protein obtainable by the method of claim 8.--

--**23.** A diagnostic composition containing a vector according to claim 5.--

--**24.** A diagnostic composition containing a vector according to claim 6.--

--**25.** A pharmaceutical composition containing a vector according to claim 5--.

--**26.** A pharmaceutical composition containing a vector according to claim 6--.

--**27.** A method for preparing a transgenic non-human animal, wherein a vector according to claim 5 is inserted into a germ cell, an embryonic cell, an egg cell, or a cell derived therefrom, and a transgenic animal is produced from the thus transformed cell.--

--**28.** A method for preparing a transgenic non-human animal, wherein a vector according to claim 6 is inserted into a germ cell, an embryonic cell, an egg cell, or a cell derived therefrom, and a transgenic animal is produced from the thus transformed cell.--

REMARKS

The specification has been amended to provide a cross-reference to the previously filed International Application. The claims have also been amended to delete the improper multiple dependencies and to place the application into better form for examination. Entry of the present amendment and favorable action on the above-identified application are respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By _____
Leonard R. Svensson, #30,330

P.O. Box 747
Falls Church, VA 22040-0747
(714) 708-8555

LRS/lmt
147-211P

(Rev 04/19/2000)

#3

STATEMENT CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) & 1.27(b))--INDEPENDENT INVENTOR

Docket No. 0147-0211P

Applicant, Patentee, or Identifier:	ROSENTHAL, André et al.
Application No.:	09/647,377
Application Filed:	September 27, 2000
International Application No.:	PCT/EP99/02055
International Filing Date:	March 26, 1999
Title:	Nucleic acid molecules which code proteins influencing bone development

As a below named inventor, I hereby state that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees to the Patent and Trademark Office described in:

- ☐ the specification filed herewith with title as listed above.
- ☒ the application identified above.
- ☐ the patent identified above.

I have not assigned, granted, conveyed, or licensed, and am under no obligation under contract or law to assign, grant, convey, or license, any rights in the invention to any person who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☒ No such person, concern, or organization exists.
- ☐ Each such person, concern, or organization is listed below.

Separate statements are required from each named person, concern, or organization having rights to the invention stating their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

Prof. Dr. Thomas WIRTH

Oct. 9, 2000 Date

Nucleic acid molecules encoding proteins which influence bone development

The present invention relates to nucleic acid molecules encoding proteins which influence the bone development of mammals, the encoded proteins, and diagnostic and pharmaceutical compositions containing such nucleic acid molecules or proteins. Moreover, the invention relates to transgenic non-human mammals which are transformed by the herein-described nucleic acid molecules or which show a modified expression of the herein-described proteins.

In humans, a number of hereditary diseases resulting in impaired growth and development of the bones are known. These, for instance, include spondyloepiphyseal dysplasias and achondroplasia. The exact genetic factors causing such disorders are, as a rule, unknown and therapeutic approaches or diagnostic methods for an early detection are in most cases not available.
The elucidation of the factors causing such growth and development disturbances and the provision of possible therapeutical approaches and diagnostic methods for an early detection of such disturbances require the identification and isolation of genes participating in the regulation of corresponding growth and development processes.

Hence, the technical problem underlying the present invention is the provision of nucleic acid molecules, the expression product of which influences growth and development processes, in particular relative to bones, in animals and humans.

This problem is solved by the provision of the embodiments as characterized in the claims.

Thus, the present invention relates to nucleic acid molecules comprising a nucleotide sequence encoding the amino acid sequence depicted in SEQ ID No. 9 or in SEQ ID No. 14, and nucleic acid molecules comprising the nucleotide sequence depicted in SEQ ID No. 8 or SEQ ID No. 13, and in particular comprising the coding region. Such nucleic acid molecules can contain the corresponding

coding regions in a continuous form or in a form interrupted by non-coding regions. Consequently, such molecules can also be genomic sequences, in which the coding regions (exons) are interrupted by non-coding regions (introns). Surprisingly, the protein encoded by such a nucleic acid molecule has been found to be a protein, the inactivation of which in mammals has the effect that the bones, except for the scull bones, become longer. Such nucleic acid molecules were found in connection with the production of a so-called transgenic "donor" mouse, that is to say a mouse which was to serve as a donor of an artificial protein. This artificial protein was to be expressed in particular tissues of the "donor" mouse, without, however having any function in this mouse. The protein should become effective only after crossbreeding the donor mouse with a suitable transgenic recipient mouse and should activate particular genes of the recipient mouse. Transgenic donor mice have already been produced from time to time. Normally, they do not show a phenotype, because the artificial gene is simply injected into fertilized egg cells and integrates into any one region of the murine genome on a purely random basis. As only about 5% of the genome are coding regions, the probability that a defect is caused in an essential gene is relatively small. Moreover, the mammal genome is diploid, that is to say, all genes are present in duplicate. Hence, most mutations are recessive, that is to say they do not show up: the mutated gene has a fully functioning copy as a counterpart, which is able to compensate for the defect generated.

Surprisingly, the donor mouse produced shows an extremely conspicuous phenotype: all bones (except for the scull) are 1.3 to 1.5 times longer. As a consequence, the transgenic mouse is about 1.5 times longer than the corresponding wildtype (see Fig. 1). This phenotype is dominant and is stably passed on, that is to say in crossbreeding a transgenic mutant with a healthy wildtype mouse, 50% of the offspring show the above-described phenotype.

Genetic analysis of this mouse showed that a gene was inactivated by the insertion into the genome of the DNA for the artificial protein to be produced in the mouse. In order to find out which gene (or which genes) is/are responsible for the phenotype found, the mutated region of the genome of the transgenic mouse was subcloned in bacteria. The localization of the mutated region in the genome of the mouse and the subsequent subcloning were possible because the nucleotide sequence of the

inserted artificial gene was known, and this information could be utilized in corresponding molecular biological experiments.

For identifying the gene, hereinafter called LOBO-gene ("long bones"), 6 kb of the subcloned region of the transgenic mouse were sequenced and first 87 kb (SEQ ID Nos. 5 and 6) and then altogether 138 kb (SEQ ID Nos. 10 to 12) were sequenced of the corresponding homologous region of the wildtype mouse. A detailed computer analysis of the sequence data led to the identification of a gene which consists of at least 13 coding segments ("exons") and is at least 110 000 bases long, but probably much longer. The first identified coding region of the murine genomic sequence carries the information for 393 amino acids (see SEQ ID No. 2). On the basis of the murine sequence data obtained, a DNA probe was constructed, which was used to isolate a human P1 clone carrying the human LOBO homologous gene. The sequence of the first sequenced 13.3 kb long region is depicted in SEQ ID No. 7. The sequence of the isolated and identified coding regions (exons) of this gene is depicted in SEQ ID No. 3 as is the amino acid sequence derived therefrom. The sequence of the subsequently sequenced 311 kb long region is depicted in SEQ ID Nos. 15 to 21. The sequence of the coding regions identified therein (exons) is depicted in SEQ ID No. 13, the amino acid sequence derived therefrom in SEQ ID No. 14. Using the genomic sequence information, it was subsequently possible to isolate a complete 3100 bp long cDNA of the murine LOBO gene (SEQ ID No. 8). Of these 3100 bp 1857 bases from the 3'-end have been also elucidated by the genomic sequencing. Hence, the exon/intron structure is known for this section: there are 12 exons, enumerated from the 3'-end in increasingly higher figures, that is to say the exon positioned at the most proximate 3'- end is numbered 1, the outermost exon identified so far is numbered 12. By means of the sequence data provided by the present invention, it is possible to isolate and characterize the still missing regions of the gene by standard methods, for instance chromosomal walking. The murine cDNA carries the information for a protein having a length of 870 amino acids (SEQ ID No. 9). A sequence comparison between the amino acid sequence derived from the murine cDNA and the known sequences showed that the encoded protein has a certain homology to a protein of C. elegans (data base

accession No. Q09568), and homologies to the Dis3-protein family and RNAseII protein family.

From the above it follows that the nucleic acid molecules of the invention encode a protein, the modification of which, in particular the reduction and/or inactivation in animals, preferably in vertebrate, preferably in mammals and more preferably in mice results in an elongation of the bones except for the scull bones. An elongation, in this connection preferably means an elongation by a factor of at least 1.2, preferably by a factor of 1.3, and more preferably by a factor in the range of 1.3 to 1.5.

As used herein, the term "modification", in particular reduction and/or inactivation, may comprise quantitative and/or qualitative deviations.

Thus, on the one hand, from a quantitative point of view, the term "modification", in particular reduction and/or "inactivation", means that the expression of the protein is reduced, preferably by at least 50%, compared to the wildtype, and is more preferably repressed altogether. The analysis of the mutation in the genome of the above-described donor mouse showed that the insertion of the artificial gene is located within an intron of the LOBO gene and has led to the deletion of 11 base pairs. The latter should not pose a problem in the intron, as this area is not a coding region anyway. Hence, it can be assumed that the artificial DNA insertion leads to a disorder in the maturation ("splicing") of the mRNA, as the artificially inserted gene contains splicing signals. This presumably leads to a so-called "aberrant splicing". In consequence, a functioning mRNA is prevented from being formed and the corresponding protein cannot be produced. In actual fact, the experimental investigation of the LOBO expression (by "Northern blot") has shown that heterozygous LOBO mice produce only about half the amount of mRNA produced by the wildtype mouse. In homozygous LOBO mice no LOBO mRNA whatsoever can be detected in Northern blot. Hence, it can be assumed that the mutation in the transgenic LOBO mouse switches off gene expression on the post transcriptional level. Apparently, the amount of LOBO protein produced in the heterozygous mice then already falls below a critical threshold value, which then leads to the dominant phenotype found.

Hence, within the present invention, the term "modification", in particular reduction and/or "inactivation" preferably means that the amount of transcripts encoding the protein described, is reduced in the cells compared to cells of corresponding wildtype animals by at least 50%, preferably by at least 70%, more preferably by at least 90%. In an especially preferred embodiment "modification", in particular reduction and/or inactivation, means that no transcripts encoding the protein described herein can be detected any more. The amount of transcripts can be detected by techniques known to a skilled person, for instance by Northern blot analysis.

On the other hand, from a qualitative point of view, the term "modification", in particular reduction and/or inactivation, means that a LOBO protein modified in the amino acid sequence is expressed, in particular a protein which has completely or largely lost its biological function. Such proteins can be shortened forms, forms, which show deletions or insertions, forms which have one or more point mutations or forms which are combinations of one or more forms of this modification. For instance, as the above-described transgene-insertion in the transgenic LOBO mouse does not affect the expression signals (promoter, enhancer etc.), it could be assumed that at least a shortened and in addition chimeric LOBO mRNA is produced from the native transcription start to the splice signal in the inserted sequence. However, a polyadenylation signal is missing from the transgene-insertion, which leads to a non-polyadenylated RNA. This RNA should possess a distinctly reduced stability vis-à-vis the normal LOBO mRNA. That is to say, the amount of this chimeric RNA should be relatively small and below the Northern blot detection limit. In fact, this chimeric RNA has not been detected in Northern blot so far. However, the much more sensitive RT-PCR method made it possible to verify the existence of this postulated chimeric RNA. Hence, this RNA can be assumed to cause the formation of a shortened LOBO protein, which carries some amino acids from the artificial gene at its COOH end.

Hence, there may be two causal factors for the long bone phenotype: (a) the amount of transcripts encoding the complete LOBO protein falls below the critical

value*) because of the transgene-insertion (loss of function mutation) and/or (b) a shortened, chimeric LOBO protein is produced which shows only partial functions of the LOBO protein or modified functions compared to the LOBO protein (gain of function mutation).

Moreover, the "modification", in particular the reduction and/or inactivation, of the protein encoded by the nucleic acid molecules of the invention, preferably leads to at least one of the following modifications in mice:

(a) The bones show significantly thickened growth zones from a histological point of view (see Figure 4). Preferably, this stems from a marked increase in the number of cells in the growth zone (chondrocytes). Moreover, these chondrocytes are distinctly larger than those of corresponding wildtype mice;
(b) life expectancy is dramatically shortened, it is 40 weeks as a maximum and about 25 weeks on the average (in wildtype mice, the mean life expectancy is 1 to 2 years).

The amino acid sequences of the murine and human proteins encoded by the nucleic acid molecules of the invention were compared with those of known proteins. The comparison showed that the amino acid sequence possesses regions highly conserved between organisms ranging from mammals (humans, mice) to invertebrates (C. elegans), unicellular eukaryotes (Saccharomyes cerevisiae, Schizosaccharomyces pombe) and prokaryotes (Leuconostoc). A relationship analysis showed in particular that the murine and human LOBO proteins constitute a group of their own (see Figure 6) which is, however, related to two other protein groups. The VacB- and the RNAse-type-II-proteins from bacteria constitute one group. The Dis3-homologous proteins from different eukaryotes, ranging from mammals to unicellular yeasts constitute a second group.
Because of the clear relationship to the two afore-mentioned groups of proteins, the function of the proteins encoded by the nucleic acid molecules of the invention can be estimated. It is assumed that because of their structural similarity to the afore-

*) Translator's note: "Should read threshold value"

mentioned two other protein groups, these proteins also have similar functions. The following functions of the LOBO proteins can be postulated on this basis:

(a) they play an important role in the regulation of the cell cycle (mitosis control) (proven for Dis3 from S. pombe; here the loss of function of the gene results in the loss of the capability of the cells to divide);

(b) because of their bearing on the cell cycle control, the conclusion suggests itself that the LOBO proteins might also play a part in carcinogenesis (so far, this has been proven for Dis3 from Homo sapiens; the results shown in Figure 5 obtained in a Northern blot analysis with a LOBO probe and RNA from diverse tumor tissues support this);

(c) the LOBO protein is most probably able to bind RNA (proven so far for the LOBO-type SSDI protein from S. cerevisiae and for the VacB- and RNAse type II proteins); and/or

(d) the LOBO protein has at least one protein binding partner. This is presumably a G-protein or a G-protein-controlling protein (proven for Dis3 from S. pombe, which binds to the G-protein regulator RCC1 and controls its activity).

Because of the impressing bone phenotype and because of the relationship to the Dis3-protein family, the provision of the nucleic acid molecules of the invention is of great importance both from a scientific and a clinical point of view. On the one hand, its further investigation could help understand the cell cycle control still better. This is in particular important in cancer research. On the other hand, the nucleic acid molecules of the invention could be responsible for human growth disorders, not caused by nutrition or hormones.

The present invention also relates to nucleic acid molecules, the complementary strand of which hybridizes with one of the above-described nucleic acid molecules of the invention and which encode a protein having the above-mentioned properties.

The term "hybridization" as used herein means hybridization under conventional hybridization conditions, preferably under stringent conditions as for instance described in Sambrook et al., Molecular Cloning, A Laboratory Manual, 2nd edition, (1989), Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY). In this context the term "stringent conditions" means that hybridization only occurs if the sequence identity is at least 90%, preferably at least 95% and more preferably of at least 97% over the entire length of the molecule hybridizing to the molecule of the invention. Specific examples of stringent and non-stringent hybridization conditions are published for instance in Hames and Higgins (editors), "Nucleic acid hybridization: A practical approach", IRL press, Oxford-Washington DC, 1985. An example of stringent hybridization conditions is, for instance, filter hybridization to polynucleotide probes, wherein the filter is washed in 0.1 x SET buffer and 0.1% SDS solution for 20 minutes at 68°C. An example of non-stringent hybridization conditions is for instance filter hybridization with polynucleotide probes, wherein the filter is washed in 2 x SET buffer and 0.1% of SDS solution for 20 minutes at 50°C. Nucleic acid molecules which hybridize to the nucleic acid molecules of the invention can, in principle, be derived from any animal organism which expresses such a protein. Molecules encoding corresponding proteins from higher animal organisms are preferred, and they preferably originate from vertebrates, and more preferably from mammals and in particular from mice or humans.

Nucleic acid molecules which hybridize with the molecules of the invention can, for instance, be isolated from genomic or cDNA libraries. Such nucleic acid molecules can be identified and isolated with the use of the nucleic acid molecules of the invention or parts of these molecules or reverse complements of these molecules, for instance by hybridization according to standard methods (see for instance Sambrook et al., 1989, Molecular Cloning, A Laboratory Manual, second edition, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY) or amplification by PCR.

For instance, nucleic acid molecules, which have exactly or substantially the nucleotide sequence which is indicated in SEQ ID No. 8 or 13 or comprise parts thereof can be used as hybridization probes. The fragments used as hybridization probe can also be synthetic fragments which are prepared by conventional

synthesis techniques and the sequence of which is substantially identical to that of a nucleic acid molecule of the invention. Once genes have been identified and isolated which hybridize to the nucleic acid sequences of the invention, the sequence should be determined and the properties of the proteins encoded by this sequence should be analyzed.

The molecules hybridizing to the nucleic acid molecules of the invention in particular comprise fragments, derivatives and allelic variants of the above-described nucleic acid molecules encoding a protein possessing the above-described properties. In the present context, the term "derivative" means that the sequences of these molecules differ from the sequences of the above-described nucleic acid molecules at one or more positions and have a high degree of homology to these sequences. In this connection, homology means a sequence identity on the amino acid level over the entire length of at least 70%, in particular an identity of at least 80%, preferably more than 90%, especially preferably more than 95%, and in particular of at least 97%. Moreover, homology preferably means a sequence identity of at least 60 %, preferably at least 70%, more preferably at least 85% and most preferably of at least 95% on the nucleic acid sequence level. Deviations from the above-described nucleic acid molecules can, for instance, be caused by deletion, addition, substitution, insertion or recombination.

Moreover, homology means that there exists functional and/or structural equivalence between the corresponding nucleic acid molecules or the proteins encoded by them. The nucleic acid molecules which are homologous to the above-described molecules and are derivatives of these molecules are, as a rule, variations of these molecules representing modifications which have the same biological function. The variations can be naturally occurring ones, for instance sequences from other animal species or mutations, and said mutations may have occurred naturally or may have been introduced by specific mutagenesis. Moreover, the variations may be synthetically prepared sequences. The allelic variants can be both naturally occurring variants and variants prepared synthetically or by recombinant DNA techniques.

The proteins encoded by different variants of the nucleic acid molecules of the invention possess certain characteristics they have in common. These may for

instance include biological activity, molecular weight, immunological reactivity, conformation etc., and physical properties, such as for instance mobility in gel electrophoresis, chromatographic behavior, sedimentation coefficients, solubility, spectroscopic properties, stability, pH optimum, temperature optimum, etc.

The proteins encoded by the nucleic acid molecules of the invention preferably have the same biological function or activity as that described above for the murine protein, i.e. in the case of a modification, in particular reduction and/or inactivation of these proteins, vertebrates can show the above-described disturbances in bone development.

It is particularly preferred for the protein encoded by the nucleic acid molecule of the invention to comprise at least one of the following two consensus sequences.

Consensus 1:

EFMLLANXXVAXXIXXXFPXXALLRRHXXP

Consensus 2:

HZALNVXXZTHFTSPIRRZXDVIVHRLLAAALGY

Moreover, the present invention relates to nucleic acid molecules, the sequence of which deviates from the sequence of one of the above-described nucleic acid molecules because of the degeneracy of the genetic code.

The nucleic acid molecules may be any nucleic acid molecules, in particular DNA or RNA molecules, for instance cDNA, genomic DNA, mRNA etc. They may be naturally occurring molecules, or molecules prepared by genetic engineering or chemical synthetic methods.

Examples of genomic murine or human sequences are given in SEQ ID Nos. 5, 6, 7, 10 to 12 and 15 to 21. The murine gene was localized in band 1D on murine chromosome 1, using "fluorescent in situ hybridization" (Fish) on whole murine metaphase chromosomes. This band is synthenic to band 2q35, in particular to region 2q35-37 on human chromosome 2. This segment also contains a gene for alkaline phosphatase, the exact position of which is known in the literature. The analysis of the murine and human genomic sequences carrying a nucleic acid molecule of the invention showed that in both cases the gene for the alkaline

phosphatase is located about 20 kb downstream of the LOBO gene, with the result that the chromosomal localization of the latter can be very precisely specified. With the help of the nucleic acid molecules disclosed in the present invention, it is possible for a skilled person to isolate homologous sequences from other organisms, in particular mammals, by means of known techniques.

Moreover, the invention relates to vectors, in particular plasmids, cosmids, viruses, bacteriophages and other vectors commonly used in genetic engineering which contain the above-described nucleic acid molecules of the invention. These are, preferably, vectors which are suitable for gene therapy.

In a preferred embodiment, the nucleic acid molecules contained in the vectors are linked to regulatory elements ensuring the expression in prokaryotic or eukaryotic cells. In this context, the term "expression" can mean both transcription as well as transcription and translation. Here, regulatory elements in particular include promoters. The number of promoters available for the expression of a nucleic acid molecule of the invention in prokaryotic cells include for instance the E. coli lac- or trp-promoter, the P_R- or P_L- promoter of the λ phage, lacI, lacZ, T3, T7, gpt etc. Eukaryotic promoters are, for instance, the CMV immediate early promoter, the HSV promoter, the thymidin kinase promoter, the SV40 promoter, LTRs of retroviruses and the mouse metallothioninI-promoter. A great number of expression vectors for the expression in prokaryotic or eukaryotic cells have been described, for instance for eukaryotes pKK223-3 (Pharmacia Fine Chemicals, Uppsala, Sweden) or GEM1 (Promega Biotec, Madison, Wi, USA), pSV2CAT, pOG44 and for prokaryotes pQE70, pQE60, pBluescript SK, etc. Vectors of the invention may contain not only promoters but also elements to increase transcription further, such as for instance the so-called transcription enhancers. Examples thereof are the SV40 enhancer, the polyoma enhancer, the cytomegalovirus early promoter enhancer and adenovirus enhancer.

The present invention also relates to host cells, in particular prokaryotic or eukaryotic host cells, which are transformed with a nucleic acid molecule or a vector

of the invention. Examples of such cells are bacterial cells, such as for instance E. coli, Streptomyces, Bacillus, Salmonella typhimurium; fungal cells, such as yeast cells, in particular Saccharomyces cerevisiae; insect cells, such as Drosophila or SF9 cells; animal cells, such as CHO or COS cells, plant cells etc.

Moreover, the present invention relates to a method for producing a protein encoded by a nucleic acid molecule of the invention, wherein a host cell according to the invention is cultured under conditions permitting the expression of the protein, and the protein is subsequently recovered from the cells and/or the culture medium. Methods for the expression of foreign proteins in different species of host cells and for recovering the protein produced are known to a skilled person.

Moreover, the invention relates to a protein which is encoded by a nucleic acid molecule of the invention or is obtainable by the method of the invention.

Moreover, the present invention relates to antibodies, directed against the proteins of the invention. Preferably, such antibodies specifically recognize a protein of the invention, that is to say they do not show any substantial cross reaction with other proteins. In this connection, the term "antibody" comprises both monoclonal and polyclonal antibodies, as well as the fragments of antibodies, for instance Fab fragments, said fragments recognizing a protein of the invention. The term "antibody" also comprises chimeric antibodies and humanized antibodies. Methods for producing monoclonal or polyclonal antibodies are known to a skilled person and have been described. Monoclonal antibodies can be prepared for instance by the hybridoma technique (Köhler and Milstein, Nature 256 (1975), 495-497), the trioma technique, the human B-cell hybridoma technique (Kozbor et al., Immunology Today 4 (1983), 72) or the EBV-hybridoma technique (Cole et al., Monoclonal Antibodies and Cancer Therapy, Alan R. Lise, Inc. (1985), 77-96).

Moreover, the present invention relates to nucleic acid molecules having a length of at least 15, preferably more than 50 and particularly preferably more than 200 nucleotides which specifically hybridize to a strand of a nucleic acid molecule of the

invention. As used herein, "specifically hybridize" means that these molecules hybridize to nucleic acid molecules encoding a protein of the invention, but do not hybridize to nucleic acid molecules encoding other proteins. In this connection, hybridizing preferably means hybridizing under stringent conditions (see above). Such nucleic acid molecules can, for instance, be used as primers for PCR amplification or as hybridization probes. The invention in particular relates to the nucleic acid molecules which hybridize with transcripts of nucleic acid molecules of the invention and can thereby prevent their translation. Such nucleic acid molecules can, for instance, be components of antisense constructs or ribozymes.

Moreover, the present invention relates to diagnostic compositions containing a nucleic acid molecule or a vector, a protein and/or an antibody according to the invention. The nucleic acid molecules of the invention can, for instance, be used to determine the localization of the corresponding gene on a chromosome. This can elucidate the correlation to genes associated with particular diseases. A method for determining the localization is for instance "fluorescent in-situ hybridization" (Fish) which is described in Verma et al. (Human Chromosomes: A Manual of Basic Techniques, Pergamon Press, New York (1988)). Moreover, the nucleic acid molecules of the invention can be used to determine whether particular individuals have mutations in the corresponding sequences. Similarly, antibodies can be used as reagents to detect the presence of a protein of the invention in a sample.

The present invention also relates to pharmaceutical compositions containing a nucleic acid molecule, vector, protein and/or antibody according to the invention, optionally in combination with a pharmaceutically acceptable carrier. For instance, nucleic acid molecules or vectors of the invention can be used in gene therapy, in order to treat pathological conditions attributable to a dysfunction of the corresponding gene, for instance to too low or too high an expression of the protein of the invention in an individual. The nucleic acid molecules can in particular be used in connection with gene targeting and/or gene replacement, in order to reconvert a mutated gene into a functional form or in order to generate a mutated gene by homologous recombination (see for instance Mouellic, Proc. Natl. Acad.

Sci. USA 87 (1990), 4712-4716; Joyner, Gene Targeting, A Practical Approach, Oxford University Press). Similarly, a protein or antibody of the invention can be used, in order to possibly control the amount of corresponding protein in an individual.

Examples of suitable pharmaceutically acceptable carriers are known to a skilled person and, for instance, include phosphate-buffered salines, water, emulsions such as oil/water emulsions, sterile solutions etc. Compositions containing such carriers can be formulated according to conventional methods. The pharmaceutical compositions can be administered to the individual in question in a suitable dose. Administration routes are, for instance, the intravenous, intraperitoneal, subcutaneous, intramuscular, topical or intradermal route. Here, dosage depends on many factors, such as the size, sex, weight and age of the patient and the type of the specific compound administered, the manner of administration etc. Generally, the daily dose is 1 μg to 10 mg of units per day. In connection with the intravenous injection of DNA, dosages of 10^6 to 10^{22} copies of the DNA molecule are usual. The compositions can be administered locally or systemically. Generally, administration will be parenteral, for instance intravenous. DNA can also be administered directly at the target site, for instance by biolistic application.

Moreover, the present invention relates to a method for preparing a transgenic, non-human animal, preferably a transgenic mouse, comprising the introduction of a nucleic acid molecule or vector into a germ cell, embryonic cell, egg cell or a cell derived therefrom. The non-human animal used as the donor of the cells in such a method may, for instance, be a healthy, non-transgenic animal or an animal which has a disease or disorder, in particular an animal which suffers from a growth disturbance, preferably a growth disturbance relating to the bones. Such a disease or disorder can be innate or can have occurred naturally or may have been caused by genetic engineering, for instance by the introduction and/or expression of a foreign DNA.

Moreover, the present invention relates to transgenic, non-human animals which are transformed with a nucleic acid molecule or vector of the invention or which are

obtainable by the above-described method. The nucleic acid molecule of the invention is preferably stably integrated in the genome of such transgenic animals. Examples of transgenic animals are transgenic rats, hamsters, dogs, monkeys, rabbits or swine. Transgenic mice are preferred.

The present invention also relates to transgenic non-human animals, in particular mice, in which the expression of the protein of the invention is reduced. Such a reduction can, for instance, be achieved by genetic modification of the cells of the animals, with the result that they express an antisense RNA, a ribozyme or a co-suppression RNA leading to reduced expression of the proteins of the invention in the cells. Alternatively, reduced expression of the proteins of the invention can also be achieved by the inactivation of at least one, preferably all copies of a gene corresponding to a molecule of the invention in the genome of the cells. Such inactivation can, for instance, be achieved by the insertion of foreign DNA into coding or non-coding regions of the corresponding gene. The inactivation of the regulatory regions of the gene is also possible. Moreover, the deletion of regions of the gene is possible.

Furthermore, the present invention also relates to the possibility of activating nucleic acid molecules of the invention in vivo, that is to say in cells, cell cultures or organisms (gene activation). This can, for instance, be achieved by the insertion of a promoter into the genome of a cell containing a nucleic acid molecule of the invention, the promoter being inserted in front of the nucleic acid molecule of the invention. This promoter is, for instance, a constitutive promoter and ensures very high expression or a promoter which is inducible, and when being induced ensures very high expression.

The plasmids HSL1 and HSL2 (HSL = Homo sapiens LOBO) prepared within the scope of the present invention were deposited according to the requirements of the Budapest Treaty at the Deutsche Sammlung von Mikroorganismen und Zellkulturen (DSMZ) in Braunschweig, Federal Republic of Germany, which is recognized as an

international depositary institution, on March 25, 1998 and March ??, 1999 with the accession numbers DSM 12073 and DSM 12715, respectively.

Figure 1 shows a heterozygous LOBO mouse with an insertion in the LOBO gene (top) compared to a wildtype mouse. The two animals are siblings and are about 6 weeks old.

Figure 2 shows the first pursued sequencing strategy for sequencing the murine and human LOBO gene. As at first only the 3'-end of the gene was sequenced, the exons starting at the 3'-end were numbered 1, 2, 3 etc. Three murine wildtype cosmid clones (middle) were sequenced, two plasmid clones were sequenced from the transgenic LOBO mouse (top) and a human P1-clone (bottom) was sequenced. The arrows denote the exons known for the time being. Seven exons were located on the genomic sequence, the eighth exon at first only existed on an EST clone. The plasmid clones from the transgenic LOBO mouse (top) contain the introduced artificial gene and the adjacent murine sequences. These murine sequences are identical to the corresponding sequences of the wildtype mouse except for 10 base pairs, which have been replaced in the transgenic mouse by the artificial gene.

Figure 3 shows a sequence comparison between the human (HS) and murine (MM) LOBO proteins and the eukaryotic Dis3-homologous and Dis3-type proteins.

Figure 4 shows a histological thin section through a bone growth zone of the LOBO mouse (right-hand side) compared to the wildtype (left-hand side). The exaggerated bone growth of the LOBO mouse is also histologically reflected: compared to the wildtype, the growth zone (proliferative zone) of the LOBO bones is significantly thickened. Moreover, the number of the hypertrophic chondrocytes in the growth zone is distinctly increased.

Furthermore, the chondrocytes of the LOBO mutant are distinctly larger than those of the wildtype mouse.

Figure 5 shows a Northern blot with RNA from human tumor tissues. A commercially available Northern blot (company Clontech) which contains RNA from 8 different human tumor tissues, was hybridized to a radioactively labeled LOBO probe. This probe was prepared by PCR amplification of a human LOBO EST clone. There are significant differences in the expression in the individual tissues: LOBO is overexpressed in chronically myelogenic leukemia (lane 3) and in melanoma (lane 8). In Burkitt lymphoma, by contrast, it does not seem to be expressed at all.

(1) promyelotic leukemia
(2) Hela cell line
(3) chronic myelogenic leukemia
(4) lymphoblastic leukemia
(5) Bukitt lymphoma
(6) colorectal adenocarcinoma
(7) lung cancer
(8) melanoma

Figure 6 shows an analysis of the relationship between LOBO and similar proteins. The analysis was made with the program PHYLIP 3.5 ("Neighbour Joining Method"). As can be seen from the pedigree, the murine and human LOBO proteins represent a group of their own, which is, however, related to the eukaryotic Dis3 proteins and the proteins of the RNAse II-type. Although some of the afore-mentioned invertebrate organisms have been sequenced completely or at least largely, no genuine LOBO homologue has been found among them.

Figure 7 shows an X-ray image of the leg of a LOBO mouse (right-hand side) compared to the wildtype (left-hand side). Every single bone of the LOBO leg is longer by the factor of 1.5 than that of the wildtype.

Figure 8 shows the phenotype of an adult heterozygous LOBO mouse. The incessant bone growth leads to a pronounced deformation of the whole animal, its mobility is highly reduced. Because of the deformation, female LOBO mice can be mated in exceptional cases only, to the effect that homozygous offspring can only be obtained in rare cases. The LOBO males are capable of reproduction.

Figure 9 shows a clone chart and a gene model of the murine LOBO gene on chromosome 1, band D. Seven overlapping cosmid clones were sequenced (A), which result in a continuous genomic sequence of 138,884 base pairs. A sequence comparison with the murine LOBO cDNA allowed 12 LOBO exons to be identified so far (B). Parallel sequencing of the LOBO gene of the transgenic mouse and the wildtype mouse allowed the position of the artificially integrated DNA segment (cassette) to be localized. It is located in the intron between exons 8 and 7.

Figure 10 shows a clone map and a gene model of the human LOBO region on chromosome 2q37. Four overlapping BAC/PAC clones were sequenced (B), which form a continuous genomic sequence of 314,449 base pairs. A sequence comparison with the murine LOBO-cDNA has allowed 11 human LOBO exons to be identified so far (A). Moreover, 6 further genes were identified in the 3' region of the LOBO gene. Five of these genes were known on the cDNA level, the sixth gene is new. Although there exist EST sequences corresponding to this gene in the data base, the localization and genomic structure of this gene have been unknown so far. The chromosomal position of the LOBO gene has been

unambiguously verified by the identification of the STS marker WI 9864 which has been mapped on 8q24.

(1) heat-stable alkaline phosphatase, exons from the data base entry M19159
(2) heat-stable alkaline phosphatase, exons from the data base entry X55958
(3) heat-stable alkaline phosphatase, exons from the data base entry M31008.
(4) unknown gene identified by computer analysis
(5) nicotine-dependent acetyl choline receptor, delta subunit, exons from the data base entry X55019
(6) nicotine-dependent acetyl choline receptor, gamma subunit; exons from the data base entry X55019

The following examples illustrate the invention.

Example 1

Detection of a mouse showing modified bone growth

In connection with the investigation of a particular artificial protein, a transgenic mouse was produced, which was to serve as a donor mouse, i.e. as a donor of the artificial protein. This protein was to be expressed in particular tissues of the donor mouse, without, however, having any function in this mouse. Only after cross-breeding of the donor mouse with a suitable transgenic recipient mouse was the protein to become effective and activate specific genes of the recipient mouse.
The donor mouse was prepared by insertion-mutagenesis during the realization of a transgenic mouse project. The actual goal of the project consisted in establishing transgenic mice which express the tetracycline-controllable transactivator (tTA) in lymphoid cells. The expression cassette used for microinjection into pronuclei comprised the following elements in the 5' to 3' orientation: μE: enhancer from the

intron of the heavy chain of the immunoglobulin genes of the mouse (700 bp); a synthetic promoter consisting of an octamer oligonucleotide and of the minimal promoter of the mouse-ß-globin gene (Wirth et al., Nature 329 (1987), 174-178) and a Tet-R/VP16 construct. The enhancer/promoter combination has been described in Annweiler et al. (Nucl. Acids Res. 20 (1990), 1503-1509). The Tet-R/VP16 construct has been described in Gossen and Bujard (Proc. Natl. Acad. Sci. USA 89 (1992), 5547-5551). The overall size of the DNA fragment is about 3 kb.

In order to prepare the transgenic mice, 1 to 2 picoliters of a DNA solution containing the above-described expression cassette (concentration 1 ng/µl) were injected into the male pronucleus of a fertilized ovum of an NMRI mouse. Subsequently, the ovum was transplanted into the oviduct of a pseudopregnant female foster mouse and was carried by this foster mouse to full term.

Transgenic donor mice normally do not show a phenotype, as the artificial gene is simply injected into the fertilized ovum and integrates in any region of the murine genome purely on a random basis.

As only about 5% of the genome comprise coding regions, the probability that a defect is caused in an essential gene is correspondingly low. Moreover, the mammalian genome is diploid, that is to say all genes are present in duplicate. As a possibly mutated gene, as a rule, has a fully functioning copy as a counterpart which can compensate for the defect in the mutated version, most mutations are recessive, that is to say, they are not expressed if only one copy of the gene is affected.

One of the founder animals obtained during the production of the above-described donor mice now surprisingly showed an extremely conspicuous phenotype in that it was distinctly larger than the siblings of the same litter. The distinctly longer tail and the longer limbs, in particular the long toes were conspicuous. The difference in size compared to normal mice significantly increased in the subsequent weeks and a marked scoliosis formed. All bones except for the scull bones are 1.3 to 1.5 times longer. Consequently, the transgenic mouse is altogether about 1.5 times longer than a corresponding wildtype mouse (see Figure 1). Because of the greatly elongated bones (see Figure 7), the transgenic mouse was termed LOBO mouse (for LOng BOnes). In mice, bone growth comes normally to a standstill in the course

of the development of the individual. In the case of the LOBO mice, the bones of the animal seem to grow incessantly up until the animal's death. In adult animals, this leads to a deformation of the whole individual (see Figure 8) which can be such that the animals can no longer move and female mutants - apart from very few exceptions - can no longer be mated.

The further histological analysis of bones of transgenic mice showed significantly thickened growth zones (see Figure 4). On the one hand, this thickening is attributable to the fact that the number of cells (chondrocytes) is distinctly increased both in the proliferative zone and in the hypertrophic zone. This has been shown not only microscopically, but also immunohistochemically with antibodies against collagen X. On the other hand, the hypertrophic chondrocytes are also larger in the mutants than in the wildtype. Another reason for the increased bone growth resides in the fact that the epiphyseal cartilages (= bone growth zones) in the mutant animals close later than in the wildtype, that is to say, that chrondrocyte proliferation and differentiation proceed longer. At present, it is unclear, whether this proliferation will ever stop completely, as the animals die after about 6 to 8 months for as yet not completely elucidated reasons. Up to said time, the bones seem to continue to grow.

As already mentioned, the mutant animal has a lower life expectancy than its wildtype siblings; about 6 weeks after their birth, LOBO mice show higher mortality, and after almost a year all mice have died for as yet unknown reasons. Homozygous mice are viable. Although so far only two litters of homozygous animals have been obtained, the homozygous animals are born in the expected number. Just as the heterozygous animals they show the increased bone growth which can unambiguously be seen from the longer toes.

Example 2

Genetic analysis of the transgenic mouse

The molecular analysis of the reason for the mutation showed that about 1.5 copies of the transgene were inserted into the intron of an endogenous gene. The insertion is located at 48.2 kb from exon 8 and 5.6 kb from exon 7 (see Figure 9) and has led to the deletion of 11 base pairs. All so far identified exons of the LOBO gene are also present in the transgenic LOBO mice and unchanged vis-à-vis wildtype sequences. Expression studies (Northern analyses) with a cDNA probe of the endogenous gene showed that the gene in question is obviously ubiquitously expressed. While most organs show only one single band (about 4 kb) in Northern blot, the liver shows an additional shorter transcript (about 2 kb). It is unclear whether this smaller transcript a) represents a splice variant of the gene, b) is attributable to the use of an alternative promoter or c) represents the cross reaction with a related gene. Compared to the wildtype animals, only about 50% of mRNA is found for this gene in the heterozygous animals if a probe from the 3'- region of the insertion site is used.

Example 3

Identification and Characterization of the LOBO Gene

In order to find out which gene(s) is/are responsible for the LOBO phenotype, the mutated region from the transgenic mouse was subcloned in bacteria. Localization of the mutated region in the murine genome and subsequent subcloning were possible because the nucleotide sequence of the artificial gene mentioned at the beginning was known and this information could be used in corresponding molecular biological experiments. For the identification of the gene which is called "LOBO gene" hereinafter, 6 kb were sequenced from the subcloned region of the transgenic mouse and at first 87 kb (see SEQ ID Nos. 5 and 6) and then 138 kb (see SEQ ID No. 10, 11 and 12) were sequenced from the corresponding homologous region of the wildtype mouse. The first sequenced region of the murine genomic DNA clone is depicted in SEQ ID Nos. 5 and 6. The sequenced region comprised a total of 86902 base pairs. For technical reasons, this region was divided into two regions, the first 49999 base pairs being depicted in SEQ ID No. 5 and comprising one exon and the remaining 36901 base pairs adjacent to this region at the 3'-end being depicted in SEQ ID No. 6. The exons are localized at the following positions:

SEQ ID No. 5:	8520 - 8753
SEQ ID No. 6:	12487 - 12660
	15497 - 15644
	15908 - 16038
	16148 - 16252
	17293 - 17394
	18083 - 18556

The open reading frame starts at position 8520 in SEQ ID No. 5. The stop codon is located at position 18202 in SEQ ID No, 6. The coding region encodes the amino acid sequence depicted in SEQ ID No. 2. A detailed computer analysis of the first obtained sequence data led to the identification of a gene which consists of at least 8 coding sections ("exons"). The first identified, coding region which is depicted in SEQ ID No. 1 carries the information for 393 amino acids. An overview of the sequenced murine clones obtained in the subsequent sequencing of the 138 kb region is schematically depicted in Figure 10. The sequenced region comprises altogether 138884 base pairs (see SEQ ID Nos. 12 to 15) and contains 12 exons. The exons are localized at the following positions:

Exon	Length [bp]	Start	End
12	80	1117	1196
11	113	30111	30223
10	108	43790	43897
9	234	60504	60737
8	80	91485	91564
7	184	114459	114642
6	87	115272	115358
5	148	117479	117626
4	131	117890	118020
3	105	118130	118234
2	102	119275	119376
1	470	120065	120534

The open reading frame starts at position 1118 in SEQ ID No. 10. The stop codon is located at position 120185.

A detailed computer analysis of the genomic sequence data led to the identification of a gene consisting of at least 13 coding segments ("exons") and being at least 120 kb long, but probably much longer.

The exons identified by genomic sequencing allowed a complete cDNA to be isolated. It is represented in SEQ ID No. 8 and is 3100 bp long. The polyadenylation

signal starts at base 3067, the poly-A tail starts at position 3083. The coding region of the cDNA is 2610 base pairs long. It starts in SEQ ID No. 8 at position 125 and ends at position 2734. The stop codon starts at position 2735. The coding region generates a 870 amino acid long protein, the sequence of which is depicted in SEQ ID No. 9. So far, only the region of position 1243 to position 3083 (start of the poly A tail) of the cDNA in SEQ ID No. 8 has been genomically identified by the 12 exons listed above in tabular form. So far, the cDNA sequence of positions 1 to 1242 has not yet been sequenced genomically, that is to say the intron/exon structure of the gene and its regulatory signals are as yet unknown.

On the basis of the murine sequence data, a DNA probe has been constructed, by means of which a human P1 clone carrying the human LOBO homologous gene, has been isolated. The first obtained sequence of the human genomic clone is depicted in SEQ ID No. 7. The exons are located at the following positions:

1	-	136
3971	-	4118
4500	-	4630
4762	-	4866
5904	-	6005
6600	-	7109

The first nucleotide of the open reading frame is at position 2. The stop codon is located at position 6759. The amino acid sequence represented by the coding region is depicted in SEQ ID No. 4. A clone containing the human genomic sequence was deposited under the accession No. DSM 12073. The first available sequence data showed that the human gene, too, has so far only partially been cloned. An overview of the first obtained and sequenced clones from mice and humans is schematically shown in Figure 2. In order to allow the remainder of the human gene to be sequenced, two further human clones were identified, using the sequence of the human P1 clone, one of said two clones overlapping with the already existing clone in the 5' region and the other in the 3' region. Sequencing of

these altogether 3 clones results in a 311 kb long, human sequence segment depicted in SEQ ID Nos. 15-21. (For technical reasons, the regions have been depicted one after the other with 49,999 base pairs each). The human LOBO exons are localized at the following positions:

Exon	Length [bp]	Start	End
11	113	2701	2813
10	108	13422	13529
9	234	27391	27624
8	80	64694	64773
7	184	94467	94650
6	87	95344	95430
5	148	98485	98632
4	131	99014	99144
3	105	99276	99380
2	102	100418	100519
1	492	101114	101605

The first nucleotide of the open reading frame is located at the genomic position 2703. The stop codon is located at position 101273. The human genomic LOBO sequence contains 4 gaps, each of which is at the most 100 base pairs wide. These gaps are located at the following positions:

Gap 1: 11805 to 11836
Gap 2: 35184 to 35199
Gap 3: 191949 to 191975
Gap 4: 251627 to 251646.

As all sequencing gaps are exclusively located in introns, the coding region remains unaffected. The coding region covered by the exons and the amino acid sequence encoded thereby are depicted in SEQ ID Nos. 13 and 14, respectively. A bacterial clone containing the human genomic sequence has been deposited under DSM

12715. The existing sequence data show that the human LOBO gene, too, has so far only partially been cloned. An overview of the human clones obtained and sequenced is schematically depicted in Figure 10.

Example 4

Chromosomal localization of the LOBO gene

One of the mouse clones obtained which represents a part of the murine LOBO gene was color-labeled by "Fish" (fluorescent in situ hybridization), and hybridized to complete murine (metaphase-) chromosomes. A color signal resulted in band 1D on chromosome 1 of the mouse. This region is homologous to band 2q35-2q37 on human chromosome 2. The result of this experimental mapping is confirmed by the sequence data: The STS marker WI-8964 which is mapped on 2q37 follows 73 kb behind the human LOBO gene. This marker is flanked by 3 phosphatase genes and 2 genes for a nicotine-dependent acetyl choline receptor (see Figure 10). These genes have also been mapped to 2q37 with the result that the chromosomal localization of the human LOBO gene has been unambiguously verified.

Example 5

Expression of the LOBO gene

Expression in the wildtype mouse:

Expression studies (Northern blot analyses) with a cDNA probe of the LOBO gene showed that the gene at issue is ubiquitously expressed. While most organs only produce one single about 4 kb long band in Northern blot, the liver is found to have an additional, shorter transcript (about 2 kb). For the time being, it is still unclear whether this small transcript (a) represents a splice variant of the gene, (b) is

attributable to the use of an alternative promoter, or (c) represents the cross reaction with a related gene.

Expression in heterozygous and homozygous LOBO mice:

In Northern blot only about 50% of the LOBO mRNA is found in heterozygous mice compared to the wildtype, while no LOBO mRNA can any longer be detected in homozygous mice. Hence, the artificial DNA insertion can be assumed to produce a disorder in the maturation of the mRNA. In this process, the introns which are still contained in the primary RNA are cut out (splicing). This cutting out is brought about by certain sequence signals. Such signals are also contained in the artificially inserted gene, with the effect that presumably a so-called aberrant splicing occurs. As a consequence, a functioning LOBO mRNA is prevented from being formed, and the corresponding protein cannot be produced, at least not in its full length. As the transcription signals of the LOBO gene are not affected by the insertion of the transgene, at least a shortened and moreover chimeric LOBO mRNA could be expected to be produced from the natural transcription start to the splice signal in the inserted sequence. However, a polyadenylation signal is missing in the transgene-insertion, which leads to a non-polyadenylated RNA which should show a distinctly lower stability than the normal mRNA. That is to say, the amount of this chimeric RNA should be rather small and below the Northern blot detection limit. In fact, this chimeric RNA has not been detected in Northern blot so far. However, with the much more sensitive RT-PCR method it has been possible to verify the existence of this postulated chimeric RNA. It can be assumed that this RNA prompts the formation of a shortened LOBO protein which possibly also performs partial functions of the complete LOBO proteins or competes with it for binding partners or for the substrate.

Expression in human tumor tissues:

The sequence of the LOBO protein derived from human cDNA shows high homology to the human Dis3-gene. For this gene, a Japanese working group has shown that its expression rate in tumor tissues was distinctly altered compared to the corresponding normal tissues. In order to examine whether the LOBO gene

behaves analogously, a commercially available Northern blot which was charged with RNAs from different tumor tissues was hybridized to a human LOBO probe. The different tumor types in fact showed significant expression differences (Figure 5). However, the biological interpretation of these data is difficult. Nevertheless, the LOBO gene might possibly play a part in carcinogenesis.

Example 6

Characterization of the LOBO protein

The murine and human amino acid sequences derived from the LOBO cDNAs were compared with known proteins. This comparison showed that the amino acid sequence has regions highly conserved between organisms ranging from mammals (mouse and humans), to invertebrates (Caenorhabditis elegans), unicellular eukaryotes (Saccharomyes cerevisiae, Schizosaccharomyces pombe) and prokaryotes. A relationship analysis of these proteins shows that the murine and human LOBO proteins represent a group of their own (see Figure 6) which is, however, related to two other protein groups. One group comprises the VacB and the RNAse type II proteins from bacteria, the VacB proteins having been found to also possess type II RNAse activity, according to a recent publication. A second group comprises the Dis3-homologous proteins from different eukaryotes ranging from mammals to unicellular yeasts.

The clear relationship to the two afore-mentioned protein groups makes it possible for the function of the LOBO proteins to be estimated, as the LOBO proteins can be assumed to also have similar functions because of their structural similarity to the afore-mentioned groups of protein. On this basis, the following functions can be postulated for the LOBO protein:

(a) it plays an important role in the cell cycle regulation (mitosis control) (proven for Dis3 from S. pombe; here, the gene's loss of function leads to the loss of the cell's capability to divide);

(b) because of its bearing on the cell cycle control, the conclusion suggests itself that the LOBO protein possibly also plays a part in carcinogenesis (proven for Dis3 from Homo sapiens; the results depicted in Figure 5 support the above-mentioned assumption).

(c) The LOBO protein most probably has the ability to bind RNA (proven for the LOBO-type SSDI protein from S. cerevisiae and for the VacB and RNAse type II proteins).

(d) The LOBO protein has at least one protein binding partner. It is presumably a G-protein or a G-protein-controlling protein (proven for Dis3 from S. pombe which binds to the G-protein-regulator RCC1 and controls its activity).

Example 7

Clinical relevance of the human LOBO protein

Sequencing of a genetic STS marker (WI-8964) in the 3' region of the LOBO gene has made its chromosomal localization in humans known. The human LOBO gene is positioned on chromosome 2, band q37. In this region, a hereditary disease has been mapped which leads to a bone growth disorder in humans, the so-called "Albright hereditary Osteodystrophy" (AHO). AHO is a syndrome consisting of a number of different symptoms pronounced in varying degrees, depending on the patient. However, three of these symptoms are characteristic of this disease and appear in all patients: hyposomia, obesity, brachydactylia. It is known from the literature that this disease is mapped on two different sites at the same time: at the above-mentioned position (2q37) and moreover on chromosome 20, band q13. The gene on 20q13 responsible for AHO is a G protein, the loss of function of which leads to the typical AHO symptoms. However, there are also AHO patients, who do

not show any defect in respect of 20q13, but show a defect (mostly a deletion) in 2q37, and nevertheless show the AHO phenotype. It is therefore possible that two proteins, one of 20q13 and one of 2q37, directly or indirectly interact and jointly perform a function. In the case of a defect in one of the two protein partners a loss of function or malfunction would occur and possibly cause a visible phenotype. As the gene of 20q13 is a G-protein and LOBO stems from 2q37, and moreover has a great similarity to (Dis3) proteins, which indirectly control G-proteins, the conclusion suggests itself that LOBO is the candidate gene for "Albright hereditary osteodystrophy". The fact that AHO patients suffer from hyposomia, while LOBO mice show exaggerated growth may be attributable to the type of mutation. The type of mutation which is present in the mouse (insertion of an artificial gene) is artificial, and certainly is not found in AHO patients. In this case, large deletions which are likely to delete the whole LOBO gene are the prevalent mutation type. An example where a gene can cause both hyposomia and megasomia, depending on the type of mutation, has been published. Moreover, the same mutation of one and the same gene in a mouse or in a human can lead to quite different phenotypes, because these organisms are different in many respects.

Patent Claims

1. A nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of

   (a) nucleic acid sequences encoding the amino acid sequence depicted in SEQ ID No. 9 or in SEQ ID No. 14;

   (b) nucleic acid sequences as depicted in SEQ ID No. 8 or SEQ ID No. 13;

   (c) nucleic acid sequences, the complementary sequence of which hybridizes to the sequences mentioned in (a) or (b);
   and

   (d) nucleic acid sequences deviating from the sequences mentioned in (c) on account of the degeneracy of the genetic code,

   wherein the nucleic acid molecule encodes a protein, the reduction and/or inactivation of which in animals results in that the bones except for the scull bones become longer.

2. The nucleic acid molecule according to claim 1, which is genomic DNA.

3. The nucleic acid molecule according to claim 1, which is a cDNA molecule.

4. The nucleic acid molecule according to claim 1, which is an RNA molecule.

5. A vector containing a nucleic acid molecule according to any one of claims 1 to 3.

6. The vector according to claim 5, wherein the nucleic acid molecule is linked to regulatory elements which ensure the expression of the nucleic acid molecule in prokaryotic or eukaryotic cells.

7. A host cell transformed by a nucleic acid molecule according to any one of claims 1 to 4 or a vector according to claim 5 or 6.

8. A method for preparing a protein which is encoded by a nucleic acid molecule according to claim 1, wherein a host cell according to claim 7 is cultured under conditions permitting the expression of the protein and the protein is recovered from the cells and/or the culture medium.

9. A protein encoded by a nucleic acid molecule according to claim 1 or obtainable by the method of claim 8.

10. An antibody against the protein of claim 9.

11. A nucleic acid molecule which is at least 15 nucleotides long and specifically hybridizes to a nucleic acid molecule according to claim 1.

12. A diagnostic composition containing a nucleic acid molecule according to any one of claims 1 to 4, a vector according to claim 5 or 6, a protein according to claim 9, an antibody according to claim 10 and/or a nucleic acid molecule according to claim 11.

13. A pharmaceutical composition containing a nucleic acid molecule according to any one of claims 1 to 4, a vector according to claim 5 or 6, a protein according to claim 9, an antibody according to claim 10 and/or a nucleic acid molecule according to claim 11 and optionally a pharmaceutically acceptable carrier.

14. A method for preparing a transgenic non-human animal, wherein a nucleic acid molecule according to claim 1 or a vector according to claim 5 or 6 is inserted

into a germ cell, an embryonic cell, an egg cell, or a cell derived therefrom, and a transgenic animal is produced from the thus transformed cell.

15. A transgenic, non-human animal which is transformed with a nucleic acid molecule according to claim 1 or a vector according to claim 5 or 6 or which is obtainable by a method according to claim 14.

16. A transgenic non-human animal, wherein the expression of a protein according to claim 9 in the cells is lower than in cells of a corresponding wildtype animal.

17. The transgenic non-human animal according to claim 16, wherein at least one genomic copy of a gene which corresponds to a nucleic acid molecule according to claim 1, is inactivated.

18. The transgenic animal according to any one of claims 15 to 17, which is a non-human mammal.

19. The transgenic animal according to claim 18 which is a mouse.

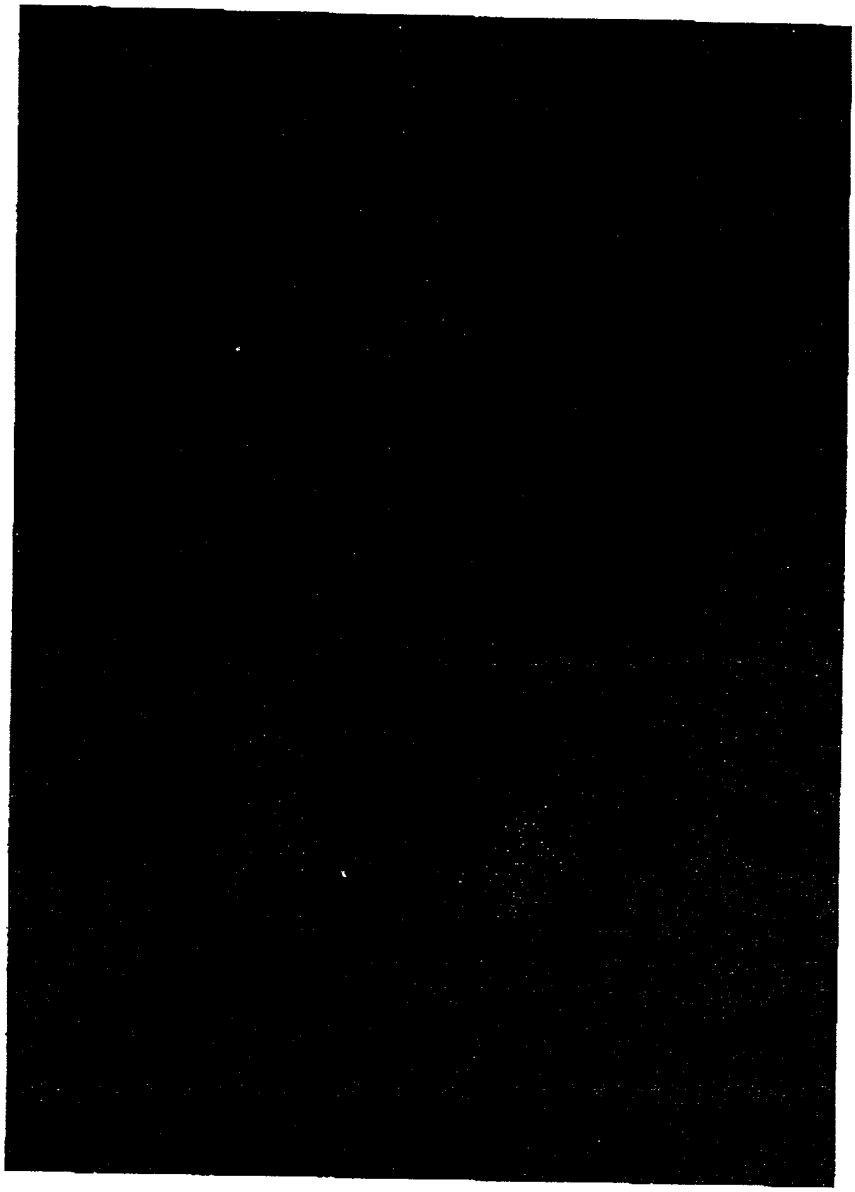


Fig. 1

Fig. 2a

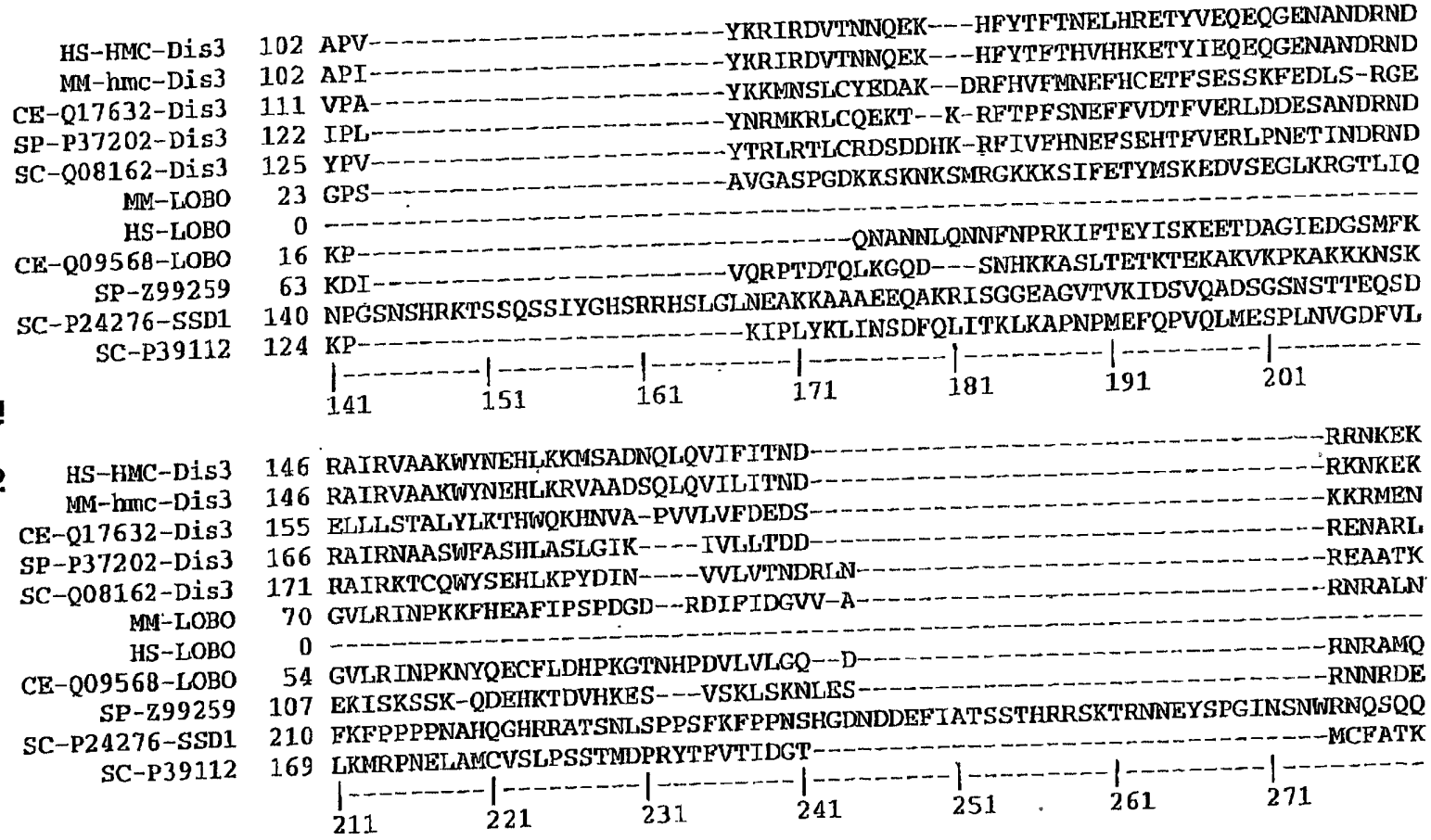


Fig. 2b

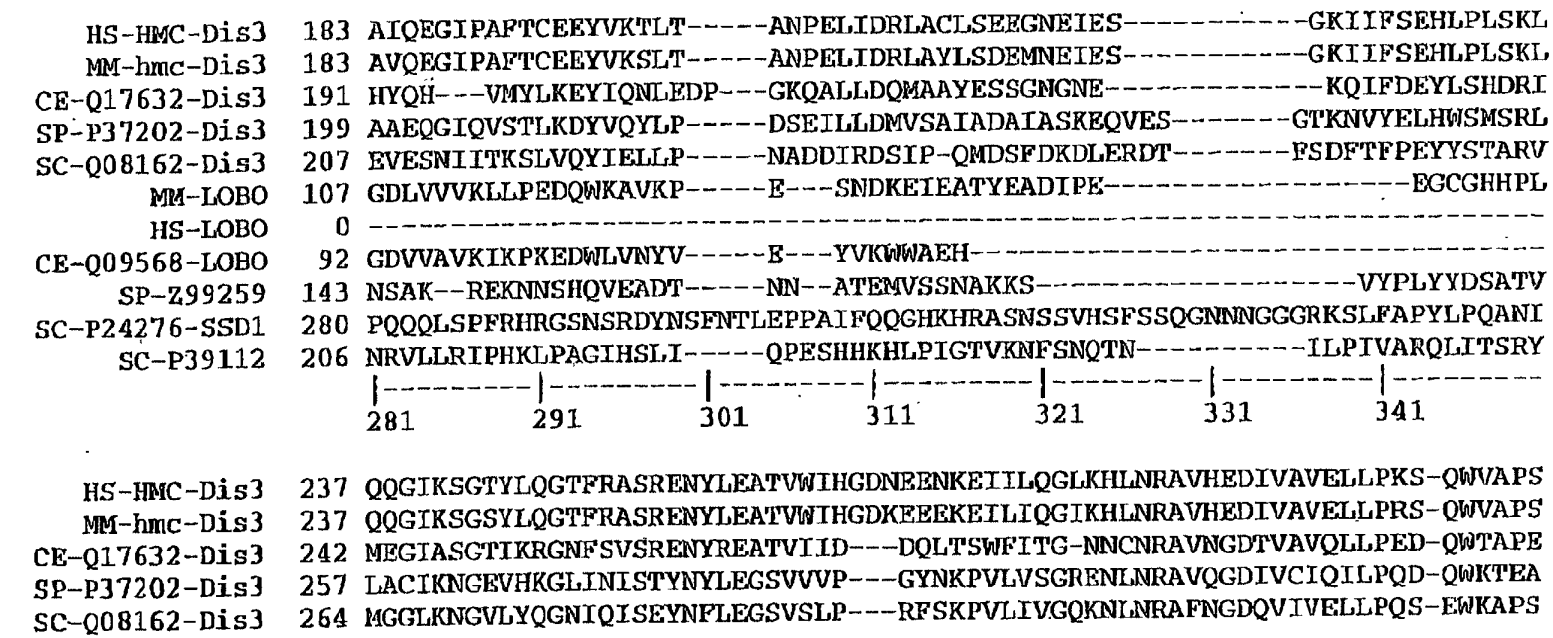


Fig. 2c

```
     HS-LOBO    0 ----------------------------------------------------------------------
CE-Q09568-LOBO  120 -K--KG------------------DRN------SGKTD------NNSPNK----TEKRCLRNE-IQDNGV
     SP-Z99259  185 KKGLKSGTLFKGTLRI-LENHR-SAFACM---EDIPDFYVDGPIARNRAFHNDVVIVEPVMNN-DSPTEK
SC-P24276-SSD1  350 PELIQEGRLVAGILRVNKKNRSDAWVSTDG--ALDADIYICGSKDRNRALEGDLVAVELLVVDDVWESKK
    SC-P39112   261 PAQISKLAWKDLPITTKKLQLLHRSLQN-----YMGPWQIPFFTLVGLVQKLDLNKALDDKNGINYLTSL
                    |---------|---------|---------|---------|---------|---------|---------
                    351       361       371       381       391       401       411

   HS-HMC-Dis3  306 S---------------VVLHDEGQN-----EEDVEKEEERERMLKTAVSEKMLK----------------
   MM-hmc-Dis3  306 S---------------VVLDDEGQN-----EDDVEKDEERELLLKTAVSEKMLR----------------
CE-Q17632-Dis3  307 KKIRLRDVEEY-----VKTADDMGN-----EDEENDDENDE--PKAKKSKKMTV----------------
SP-P37202-Dis3  323 EEIAD---------------DDED---VVVSTAAEPDSAR--INDLELITKRN--AH-------------
SC-Q08162-Dis3  330 SIVLDSEHFDVNDNPDIEAGDDDDNNESSSNTTVISDKQRRLLAKDAMIAQRSKKIQ-------------
       MM-LOBO  217 D---------------------------------------------------------------------
       HS-LOBO    0 ------------------------------SDEVPDSCLITIGAIVHILEKKHFRV--------------
CE-Q09568-LOBO  152 T-----------------------------ELGGAMEHLERLEIKSVASFKGDS--R-------------
     SP-Z99259  249 SNFLQNG----VEK--VKIKDHDD------ELGGAMEHLERLEIKSVASFKGDS--R-------------
SC-P24276-SSD1  418 EKEEKKRRKDASMQHDLIPLNSSDDYHNDASVTAATSNNFLSSPSSSDSLSKDDLSVRRKRSSTINNDSD
     SC-P39112  326 VN---N----------YHTVNDIP-----INSPTFVSTYWAIMQQQESNLWGEIHLN-------------
                    |---------|---------|---------|---------|---------|---------|---------
                    421       431       441       451       461       471       481
```

Fig. 2d

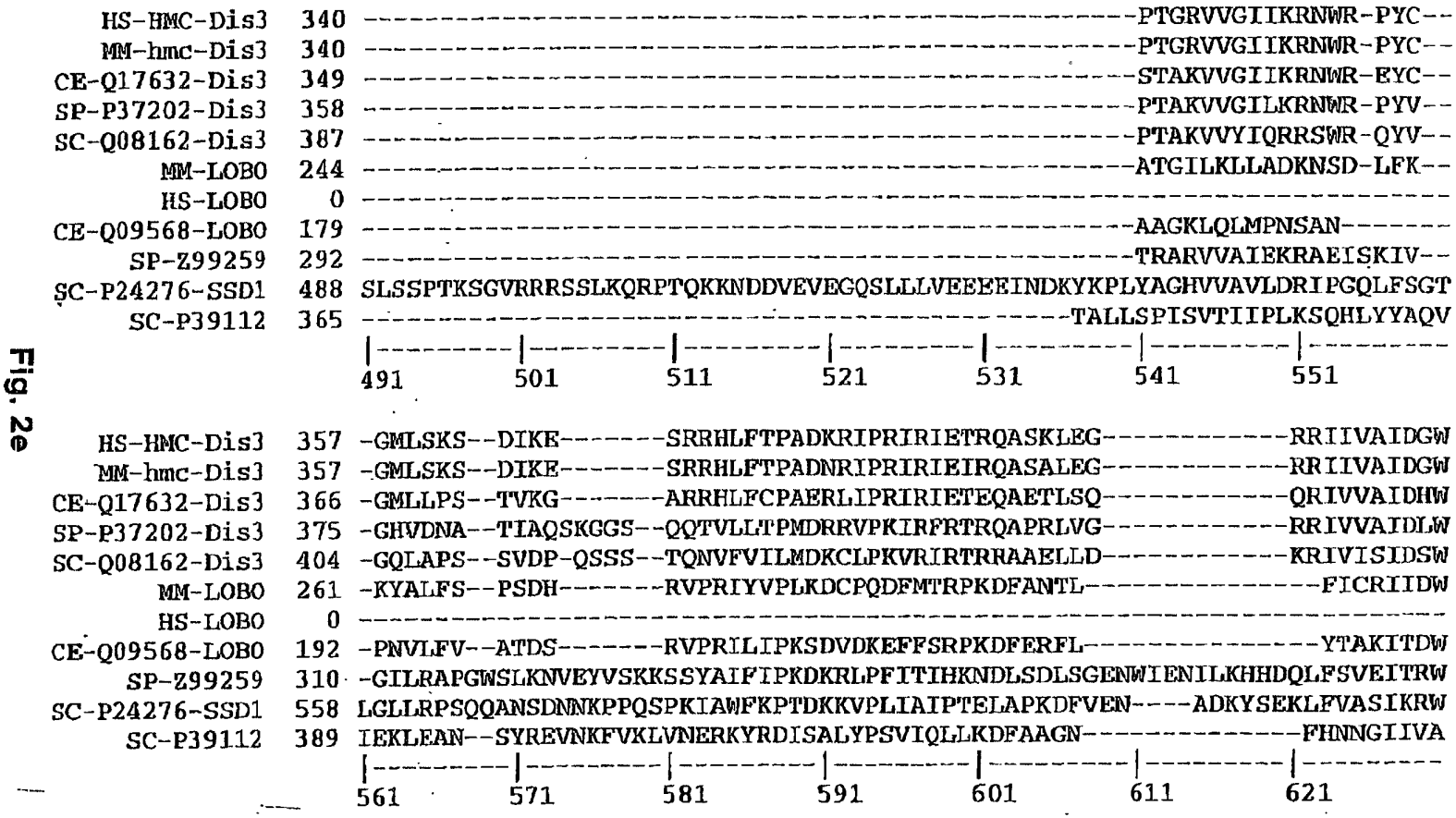


Fig. 2e

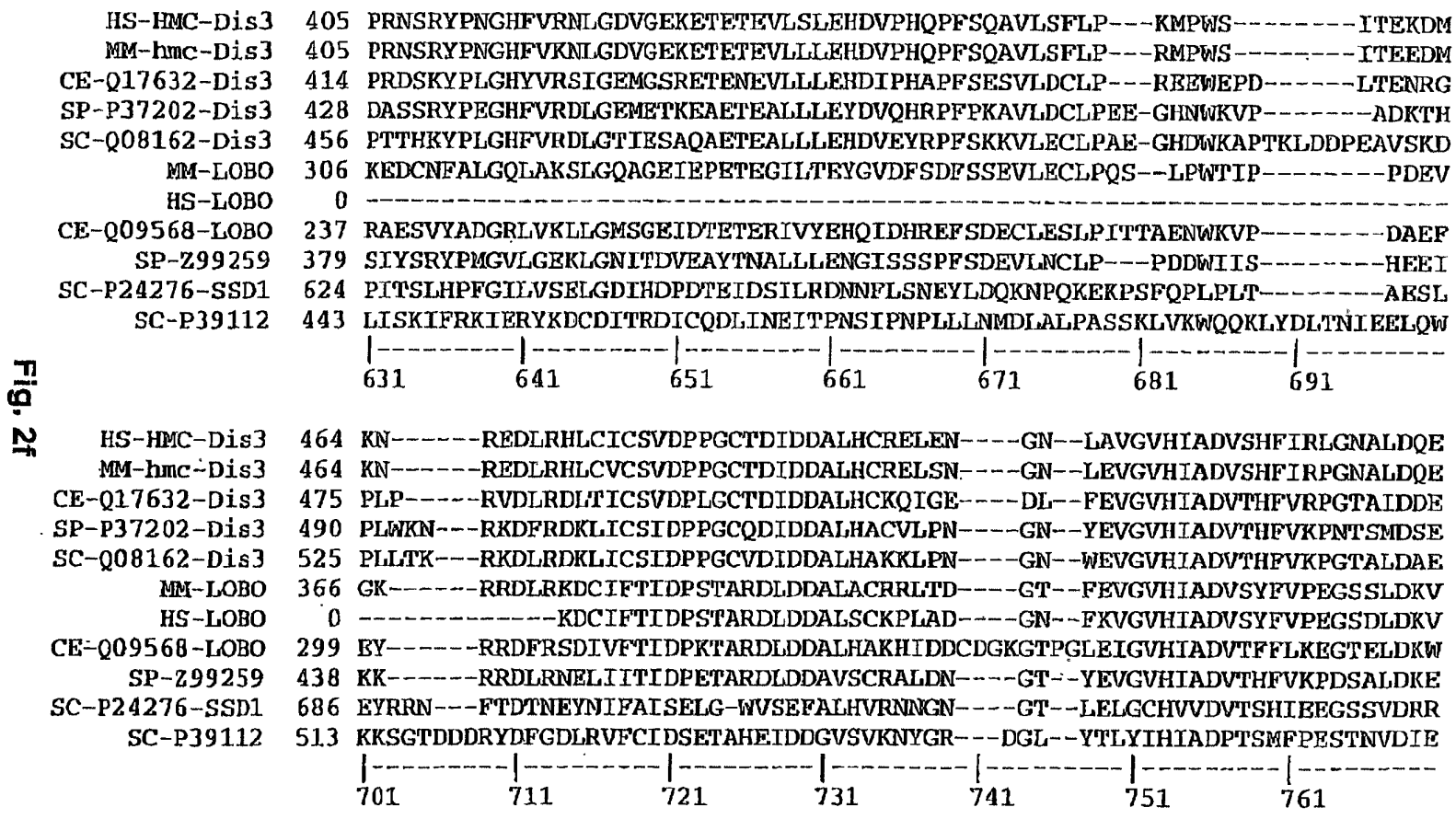


Fig. 2f

```
HS-HMC-Dis3   522 ----------SARRGTTVYLCEKRIDMVPELLSS--NLCSLKCDVDRLAFSCIWEMNHNA--------EILK
MM-hmc-Dis3   522 ----------SARRGTTVYLCEKRIDMVPELLSS--NLCSLRSNVDRLAFSCIWEMNHNA--------EILK
CE-Q17632-Dis3 534 ----------AALRGTTVYLCDRRIDMLPCLLSS--NLCSLRGEERYAFSCIWTMTSSA--------DIQS
SP-P37202-Dis3 551 ----------AASRGTTVYLVDKRIDMLPMLLGT--DLCSLRPYVERFAFSCIWEMDENA--------NIIK
SC-Q08162-Dis3 586 ----------GAARGTSVYLVDKRIDMLPMLLGT--DLCSLKPYVDRFAFSVIWELDDSA--------NIVN
MM-LOBO       424 ----------AAERATSVYLVQKVVPMLPRLLCE--ELCSLNPMTDKLTFSVIWKLTPEG--------KILE
HS-LOBO        51 ----------AAERATSVYLVQKVVPMLPRLLCE--ELCSLNPMSDKLTFSVIWTLTPEG--------KILD
```

Fig. 2g

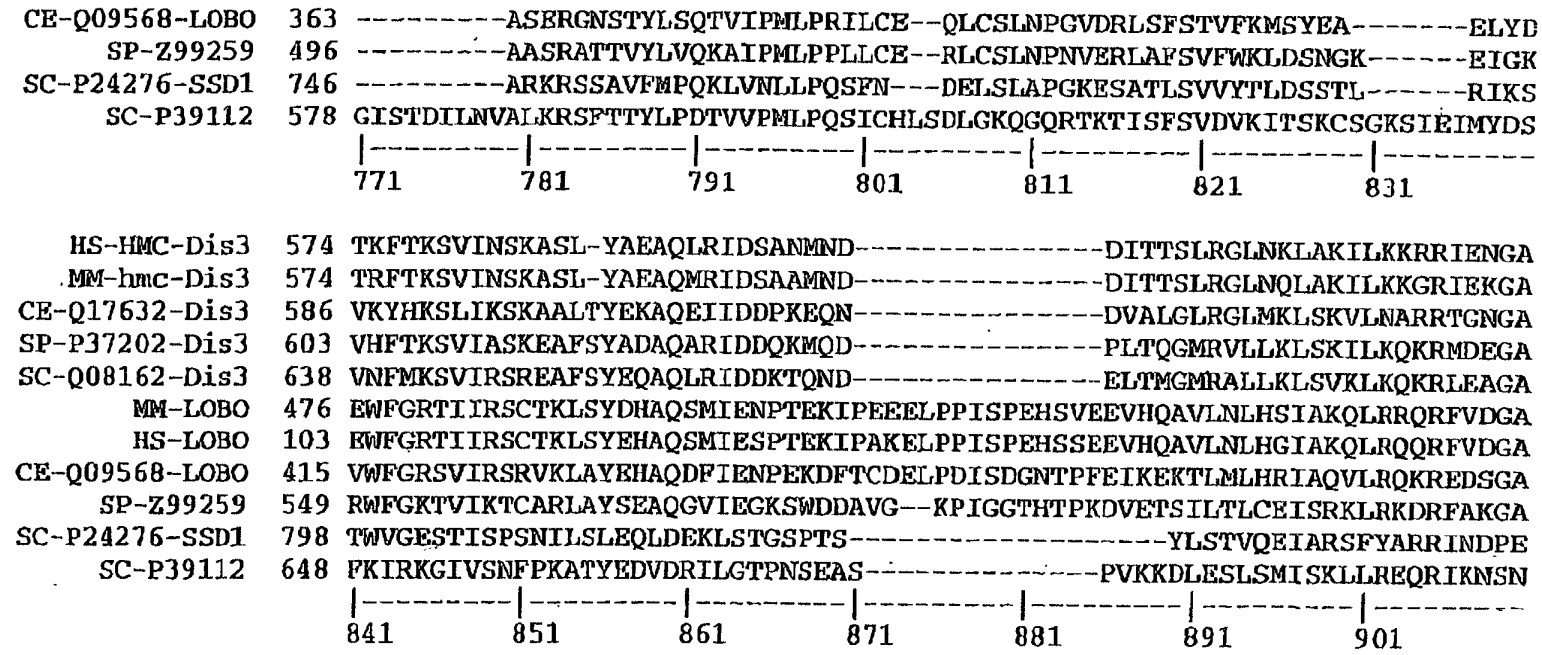


Fig. 2h

```
HS-HMC-Dis3     628 LTLSSPEVRFHMDSETHDPIDLQTKELRETNSMVEEFMLLANISVAKKIHEEFSEHALLRKHPAPPPSNY
MM-hmc-Dis3     628 LTLSSPEIRFHMDSETHDPIDLQTKELRETNSMVEEFMLLANISVAKKIHEEFSEHALLRKHPAPPPSNY
CE-Q17632-Dis3  641 LTLASSEVRFDMDWESRTPKKVMEKQHLDTHSMVEEFMLLANISVAEKILEEYPDCALLRRHPVPLKESY
SP-P37202-Dis3  658 LNLASPEVRIQTDNETSDPMDVEIKQLLETNSLVEEFMLLANISVAQKIYDAFPQTAVLRRHAAPPLTNF
SC-Q08162-Dis3  693 LNLASPEVKVHMDSETSDPNEVEIKKLLATNSLVEEFMLLANISVARKIYDAFPQTAMLRRHAAPPSTNF
MM-LOBO         546 LRLDQLKLAFTLDHETGLPQGCHIYEYRDSNKLVEEFMLLANMAVAHKIHRAFPEQALLRRHPPPQTRML
HS-LOBO         173 LRLDQLKLAFTLDHETGLPQGCHIYEYRESNKLVEEFMLLANMAVAHKIHRAFPEQALLRRHPPPQTRML
CE-Q09568-LOBO  485 LRIELPRLKFALDEDK-KPQGVSIYEIKDSNKLVEEFMLLANMEVAKKIAENFPEHALLRNHPPPKEKMI
SP-Z99259       617 VEINSTELKFQLDEYG-MPNKCEVYEQTDANHLIEEFMLLANRSVAEHISKNFSNNSLLRRHASPKEKQI
SC-P24276-SSD1  849 ATILLPTLSILLESLDDEKVKVDINILDRTLGFVVINEIKRKVNSTVAEKIYTKLGDLALLRRQMQPIATKM
SC-P39112       704 AVIFGEGFNKGLVMLN----ADSEGELTEVTFSDQEETLSTILVSEMMILANTLTGRYPAEN------KI
                    |----------|----------|----------|----------|----------|----------|
                    911        921        931        941        951        961        971

HS-HMC-Dis3     698 ETLVKAARS-RNLEIKTDTAKSLAESLDQAESPTFPYLN--TLLRILATRCMMQAVYFCSGMD-------
MM-hmc-Dis3     698 DILVKAAKS-KNLQIKTDTAKSLADSLDRAESPDFPYLN--TLLRILATRCMMQAVYFCSGMD-------
CE-Q17632-Dis3  711 KPLVEAARH-RGFEIIVESGKGLADSLNKCVDKKNPMLN--RLLRMLTTRCMTQAVYFSAGKDGFSDIKL
SP-P37202-Dis3  728 DSLQDILRVCKGMHLKCDTSKSLAKSLDECVDPKEPYFN--TLLRILTTKCMLSAEYFCSGTFAP------
SC-Q08162-Dis3  763 EILNEMLNTRKNMSISLESSKALADSLDRCVDPEDPYFN--TLVRIMSTRCMMAAQYFYSGAYSY------
MM-LOBO         616 SDLVEFCDQ-MGLPMDVSSAGALNKSLTKTFGDDKYSLARKEVLTNMYSRPMQMALYFCSGMLQD-----
HS-LOBO         243 SDLVEFCDQ-MGLPVDFSSAGALNKSLTQTFGDDKYSLARKEVLTNMCSRPMQMALYFCSGLLQD-----
CE-Q09568-LOBO  554 KDVAEQCAR-IGFPLDGRTSGLLSTSLRKYQGKSRLDMCIRQVISSLTTKPMQQAKYFCT--FEM------
SP-Z99259       686 NEFCHFLKS-MNFDFDASSSAAFNASMVRLRSTFNEELV--ELFENMAVRSLNRAEYFCTGDFGEK-----
SC-P24276-SSD1  919 ASFRKKIQN-FGYNFDTNTADELIKGVLKIKDDDVRVGI-------EILLFKTMPRARYFTAGKVD------
SC-P39112       764 GGVFRCYKQ---LPLGEVAQQQYDSMITSTKKGIFPKLK-------DIVKLSSLLNSSFYTGRPFR------
                    |----------|----------|----------|----------|----------|----------|
                    981        991        1001       1011       1021       1031       1041
```

Fig. 2i

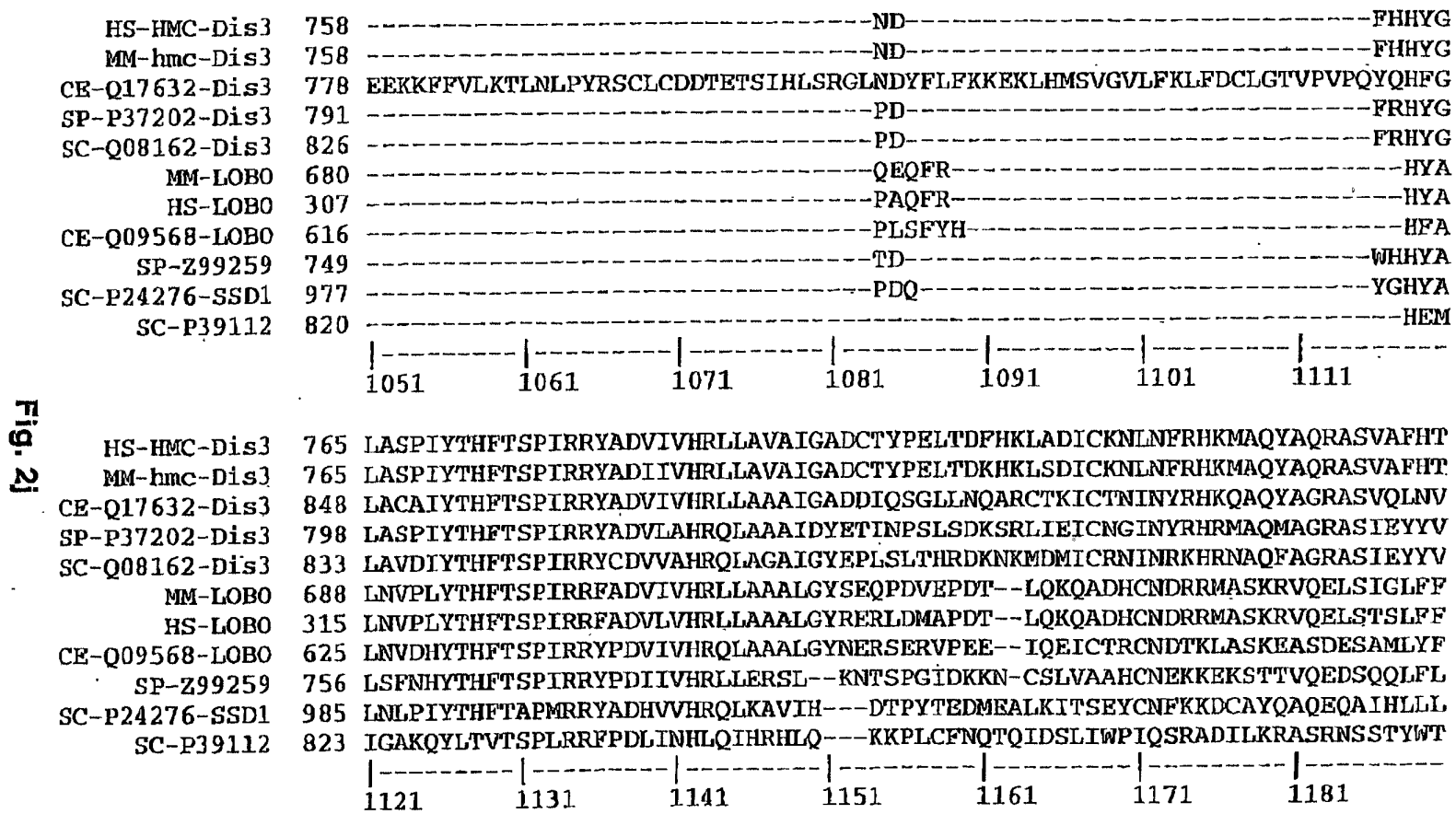


Fig. 2j

```
HS-HMC-Dis3     835 QLFFKSKG-----IVSEEAYILFVRKNAIVVLIPKYGLEGTVFFEEKDKPNPQLI----------
MM-hmc-Dis3     835 QLFFKSKG-----IVSEEAYILFVRKNAIVVLIPKYGLEGTVFFEEKDKPKPRLA----------
CE-Q17632-Dis3  918 VRYFKGK--------VETCEGFVMGVRNNGIQVFVPKYGLESIIVLQTSAASG--TT----------
SP-P37202-Dis3  868 GQALKGG--------VAEEDAYVIKVFKNGFVVFIARFGLEGIVYTKSLSSVLEPN----------
SC-Q08162-Dis3  903 GQVMRNN--------ESTETGYVIKVFNNGIVVLVPKFGVEGLIRLDNLT--EDPNS----------
        MM-LOBO 756 AVLVKESG--------PLESEAMVMGVLNQAFDVLVLRFGVQKRIYCNALALRSYSFQ----------
        HS-LOBO 383 AVLVKESG--------PLESEAMVMGILKQAFDVLVLRYGVQKRIYCNALALRSHHFQ----------
CE-Q09568-LOBO  693 GVFIHQTG--------PMKCQAVVLGVMDLSFDVLIVEYGVVKRVYVDKMKR---DFN----------
```

Fig. 2k

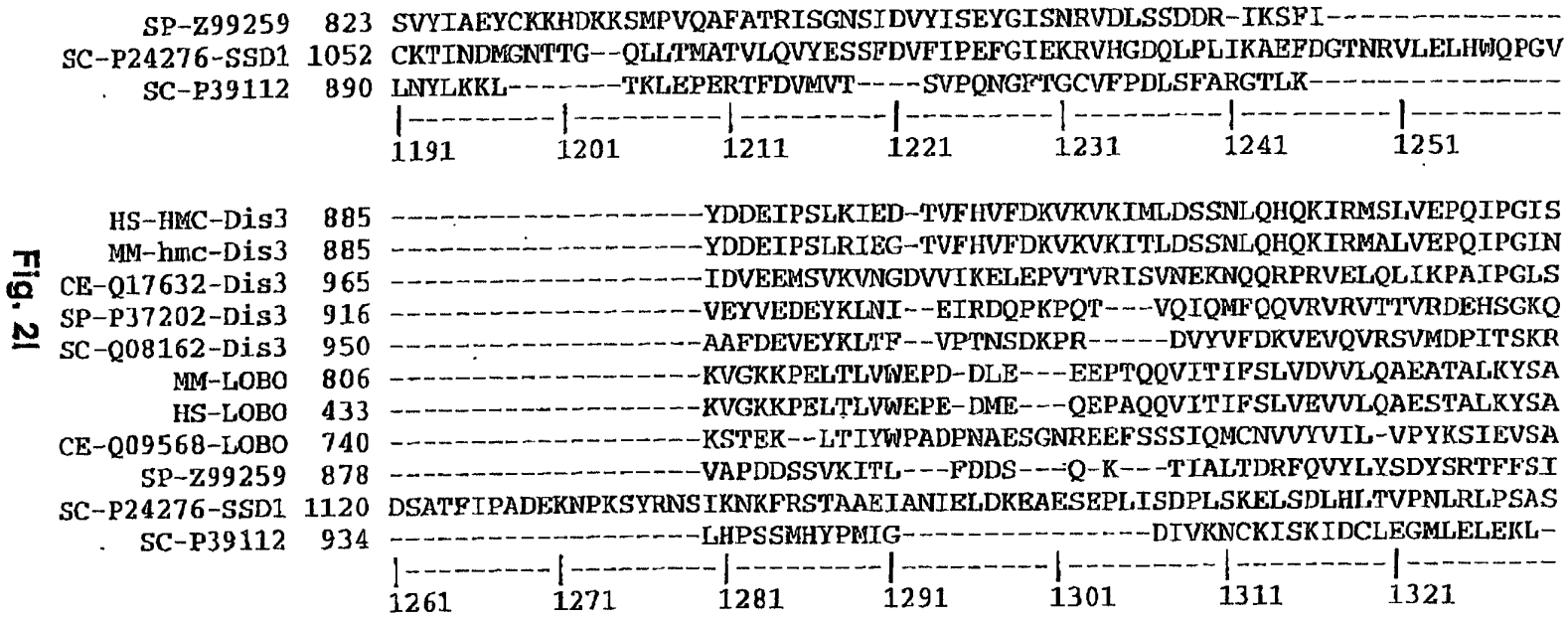


Fig. 2I

```
HS-HMC-Dis3     935 IPTDTS----------NMDLMGPKKKKMKLGK----------
MM-hmc-Dis3     935 IPPNVA----------DKALTAPGGKKRKLEK----------
CE-Q17632-Dis3 1016 V-----------------DFDLSSSSEG-----LGL----------
SP-P37202-Dis3  962 K-----V----------QTTLVY----------
SC-Q08162-Dis3  994 K-----A----------ELLLK----------
      MM-LOBO   853 ILKRPG----------LEKASDEEPED----------
      HS-LOBO   480 ILKRPGTQGHLGPEKEEESDGEPEDSSTS----------
CE-Q09568-LOBO  788 TIVRPS-----LEQRNILKSTLKDMKETGSTILQ----------
   SP-Z99259    919 R-----------------CSLVSLN----------
SC-P24276-SSD1 1190 DNKQNALEKFTSTTETRIENDNYIQEIHELQKIPILLRAEVGMALPCLTVRALNPFMKRV
                    |---------|---------|---------|---------|---------|
                   1331      1341      1351      1361      1371      1381
```

Fig. 2m

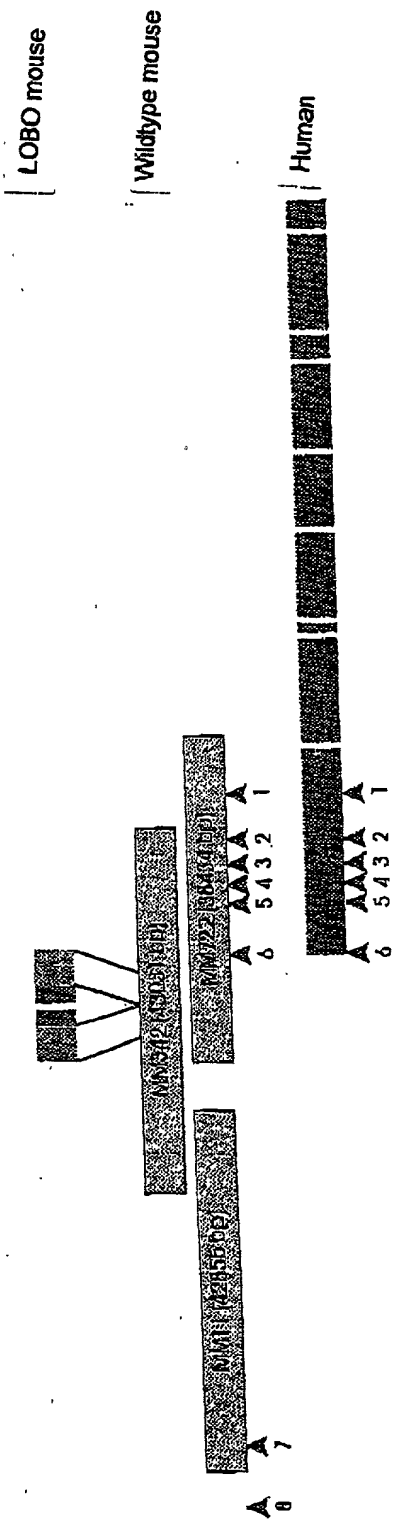

LOBO mouse
Wildtype mouse
Human
AAAA
6 5 4 3 2 1
AAAA
6 5 4 3 2 1
A
7
A
8

Fig. 3

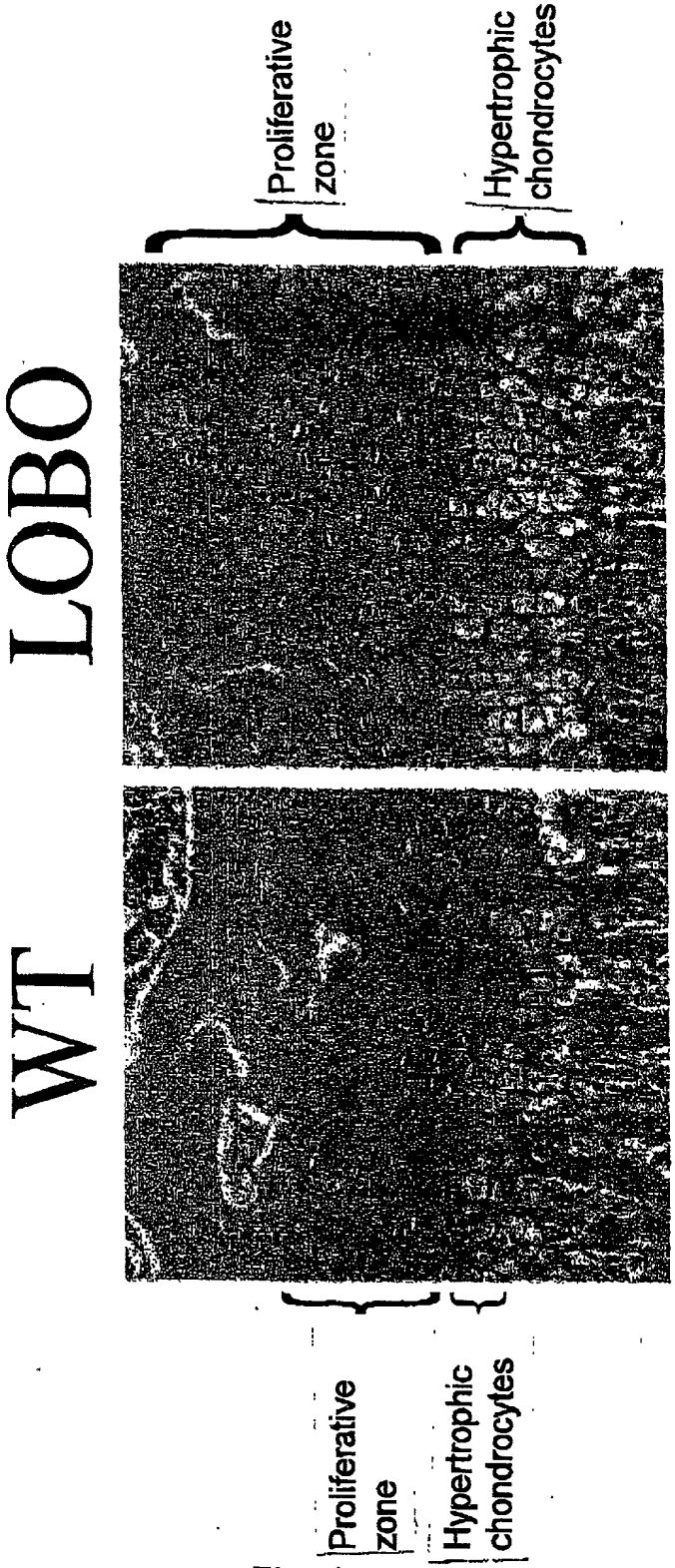

WT
LOBO
Proliferative zone
Hypertrophic chondrocytes
Proliferative zone
Hypertrophic chondrocytes

Fig. 4

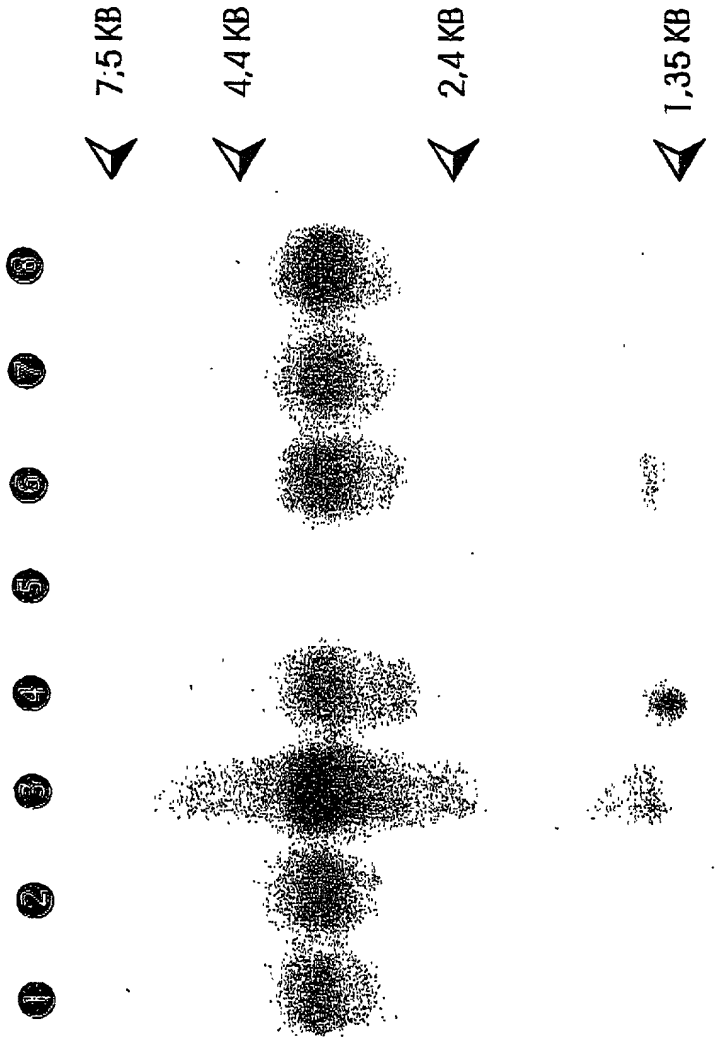


Fig. 5

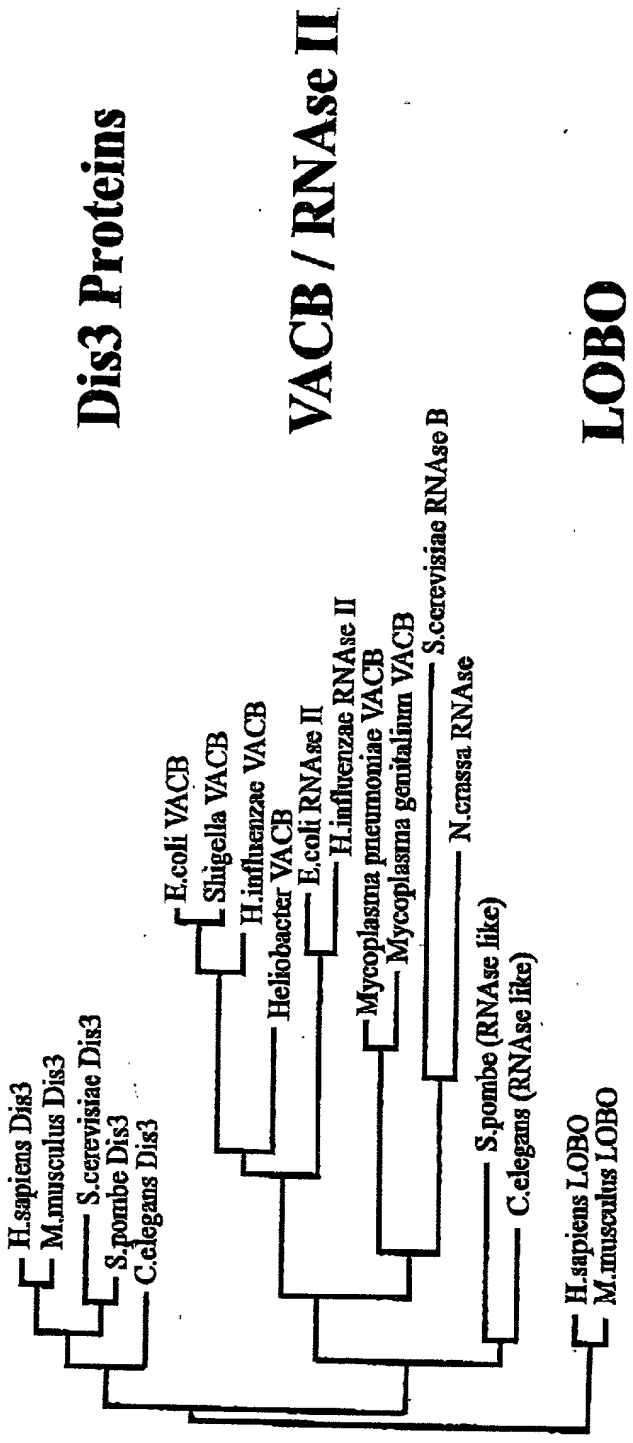

Dis3 Proteins
VACB / RNAse II
LOBO
H.sapiens Dis3
M.musculus Dis3
S.cerevisiae Dis3
S.pombe Dis3
C.elegans Dis3
E.coli VACB
Shigella VACB
H.influenzae VACB
Heliobacter VACB
E.coli RNAse II
H.influenzae RNAse II
Mycoplasma pneumoniae VACB
Mycoplasma genitalium VACB
S.cerevisiae RNAse B
N.crassa RNAse
S.pombe (RNAse like)
C.elegans (RNAse like)
H.sapiens LOBO
M.musculus LOBO

Fig. 6

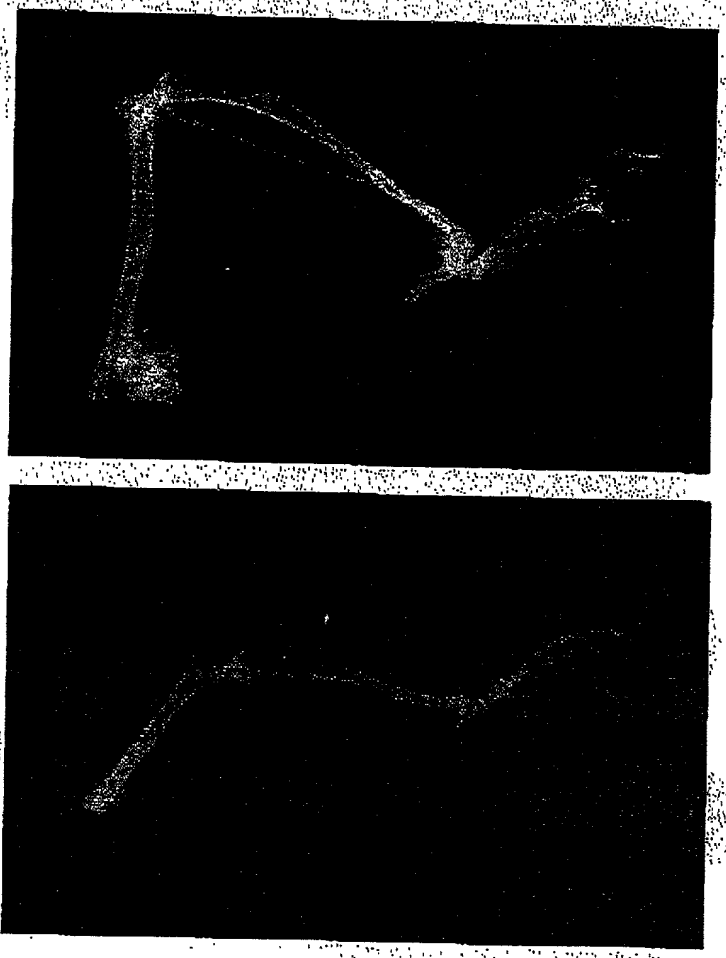


Fig. 7

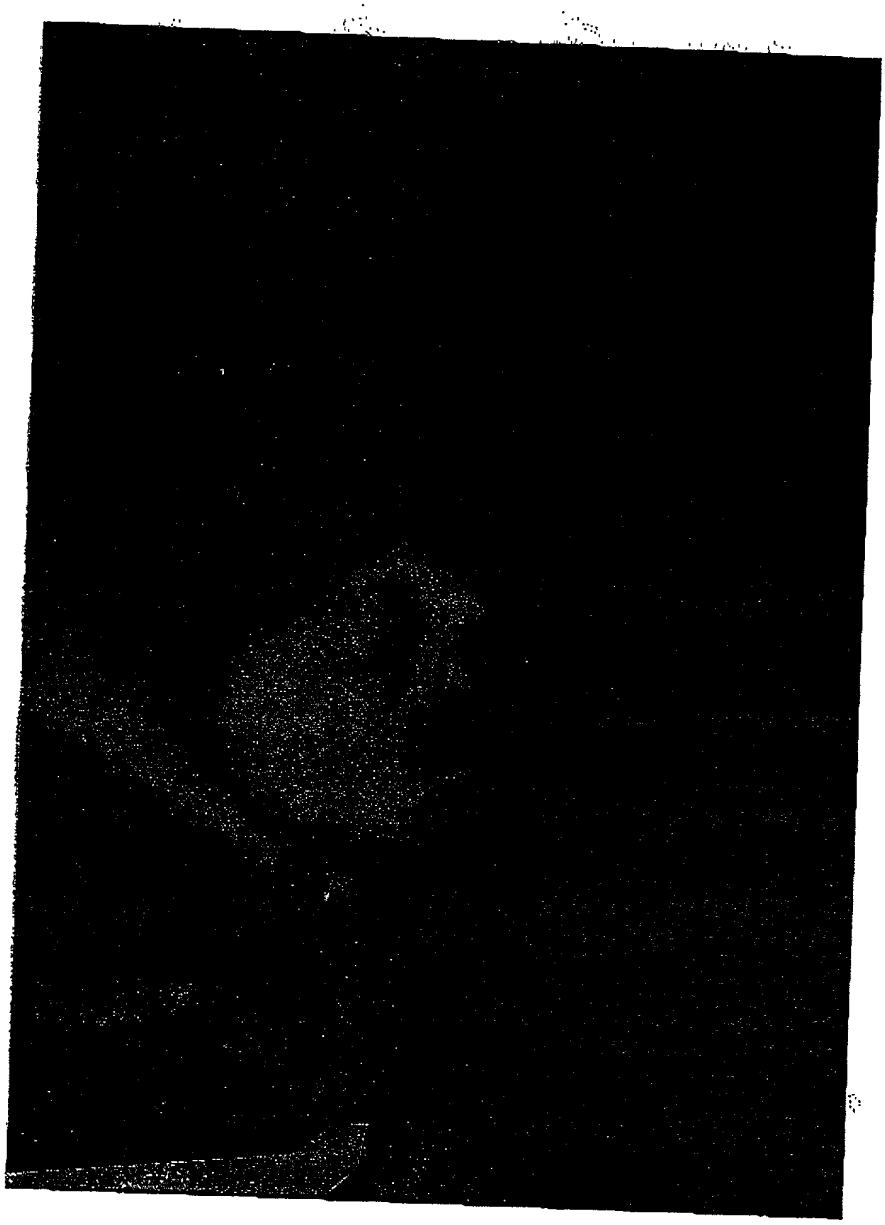


Fig. 8

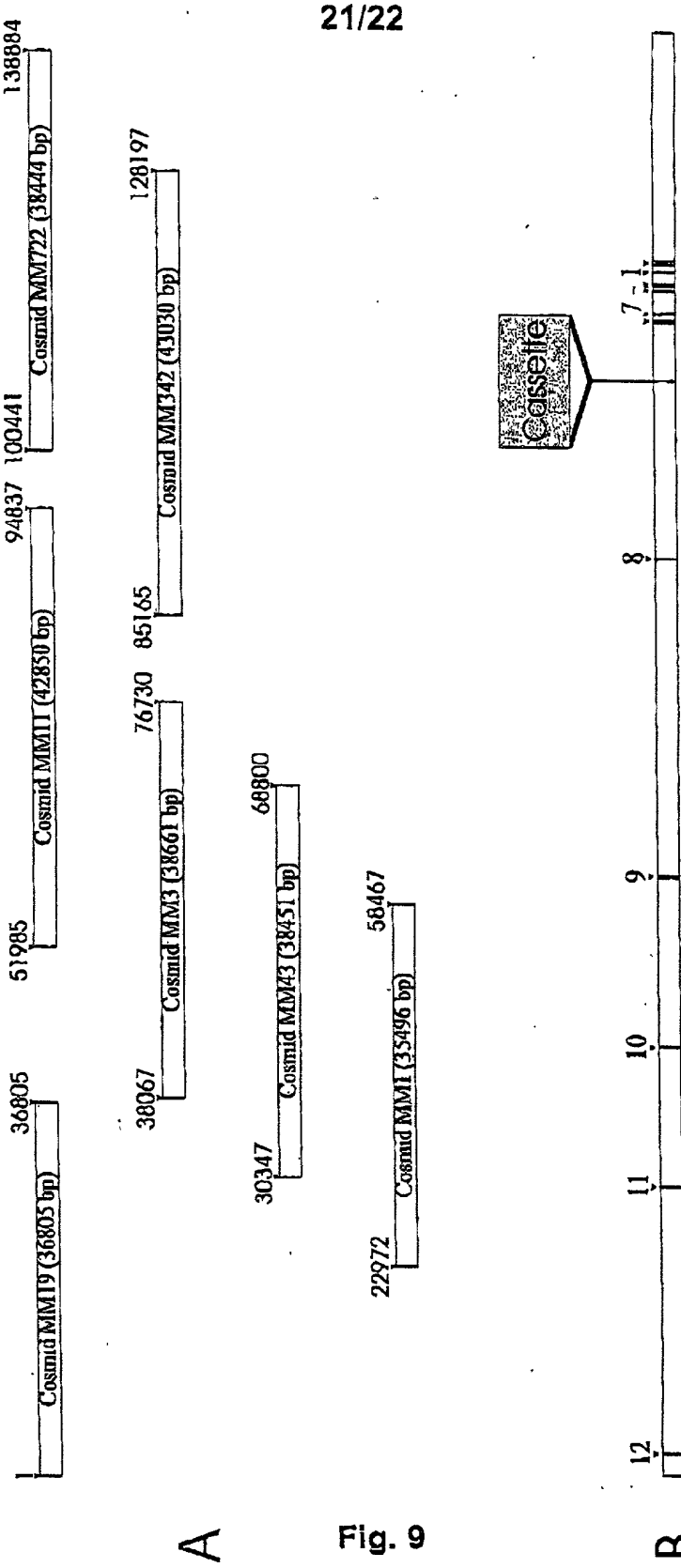

1
36805
Cosmid MM19 (36805 bp)
51985
94837
Cosmid MM11 (42850 bp)
100441
138884
Cosmid MM722 (38444 bp)
38067
76730
Cosmid MM3 (38661 bp)
85165
128197
Cosmid MM342 (43030 bp)
30347
68800
Cosmid MM43 (38451 bp)
22972
58467
Cosmid MM1 (35496 bp)
A
12
11
10
9
8
7
1
Cassette
B

Fig. 9

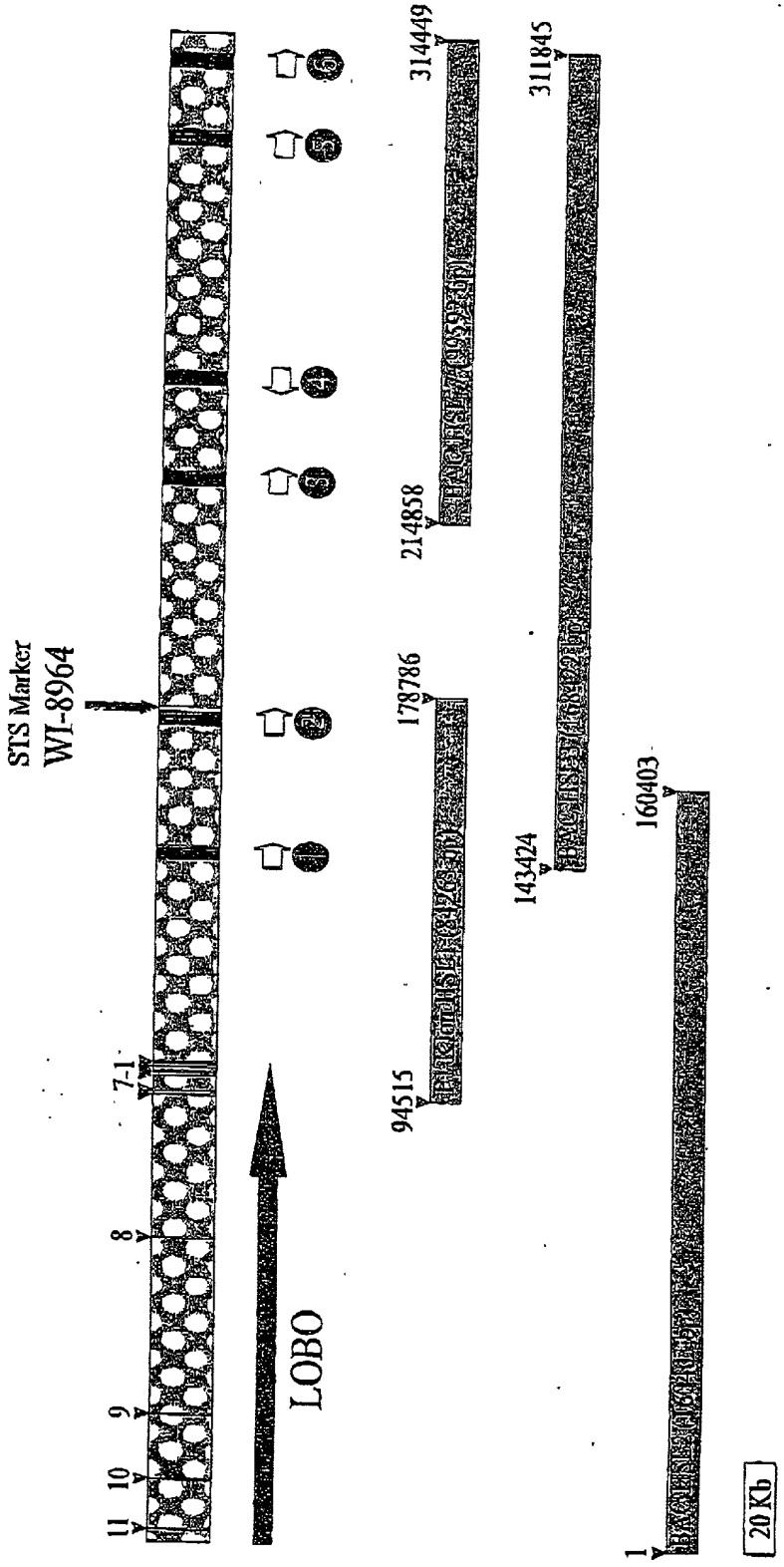

STS Marker
WI-8964
LOBO
7-1
8
9
10
11
94515
179786
214858
314449
143424
311845
160403
1
20 Kb

Fig. 10

Attorney Docket No. 0147 0211P

BIRCH, STEWART, KOLASCH & BIRCH, LLP

P.O. Box 747 • Falls Church, Virginia 22040-0747
Telephone: (703) 205-8000 • Facsimile: (703) 205-8050

PLEASE NOTE: YOU MUST COMPLETE THE FOLLOWING

COMBINED DECLARATION AND POWER OF ATTORNEY FOR PATENT AND DESIGN APPLICATIONS

As a below named inventor, I hereby declare that: my residence, post office address and citizenship are as stated next to my name; that I verily believe that I am the original, first and sole inventor (if only one inventor is named below) or an original, first and joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Insert Title: NUCLEIC ACID MOLECULES ENCODING PROTEINS WHICH INFLUENCE BONE DEVELOPMENT

Fill in Appropriate Information - For Use Without Specification Attached:

the specification of which is attached hereto. If not attached hereto,
the specification was filed on September 27, 2000 as
United States Application Number 09/647,377;
and amended on _____ (if applicable) and/or
the specification was filed on March 26, 1999 as PCT
International Application Number PCT/EP99/02055; and was
amended under PCT Article 19 on _____ (if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I do not know and do not believe the same was ever known or used in the United States of America before my or our invention thereof, or patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application, that the same was not in public use or on sale in the United States of America more than one year prior to this application, that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representative or assigns more than twelve months (six months for designs) prior to this application, and that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of America prior to this application by me or my legal representatives or assigns, except as follows.

I hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Insert Priority Information: (if appropriate)

Prior Foreign Application(s)			Priority Claimed	
DE 198 13 799.0 (Number)	Germany (Country)	March 27, 1998 (Month/Day/Year Filed)	☒ Yes	☐ No
(Number)	(Country)	(Month/Day/Year Filed)	☐ Yes	☐ No
(Number)	(Country)	(Month/Day/Year Filed)	☐ Yes	☐ No
(Number)	(Country)	(Month/Day/Year Filed)	☐ Yes	☐ No

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional applications(s) listed below.

Insert Provisional Application(s): (if any)

(Application Number)	(Filing Date)
(Application Number)	(Filing Date)

All Foreign Applications, if any, for any Patent or Inventor's Certificate Filed More than 12 Months (6 Months for Designs) Prior to the Filing Date of This Application:

Insert Requested Information: (if appropriate)

Country	Application Number	Date of Filing (Month/Day/Year)

I hereby claim the benefit under Title 35, United States Code, §120 of any United States and/or PCT application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States and/or PCT application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information which is material to the patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

Insert Prior U.S. Application(s): (if any)

(Application Number)	(Filing Date)	(Status - patented, pending, abandoned)
(Application Number)	(Filing Date)	(Status - patented, pending, abandoned)

Full Name of Fifth Inventor, if any: see above

GIVEN NAME/FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Thomas AIGNER		12/1/00
Residence (City, State & Country)		CITIZENSHIP
Erlangen, Germany		German
MAILING ADDRESS (Complete Street Address including City, State & Country)		
Am Europakanal 40, 91056 Erlangen Germany		

Full Name of Sixth Inventor, if any: see above

GIVEN NAME/FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Residence (City, State & Country)		CITIZENSHIP
MAILING ADDRESS (Complete Street Address including City, State & Country)		

Full Name of Seventh Inventor, if any: see above

GIVEN NAME/FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Residence (City, State & Country)		CITIZENSHIP
MAILING ADDRESS (Complete Street Address including City, State & Country)		

Full Name of Eighth Inventor, if any: see above

GIVEN NAME/FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Residence (City, State & Country)		CITIZENSHIP
MAILING ADDRESS (Complete Street Address including City, State & Country)		

Full Name of Ninth Inventor, if any: see above

GIVEN NAME/FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Residence (City, State & Country)		CITIZENSHIP
MAILING ADDRESS (Complete Street Address including City, State & Country)		

Full Name of Tenth Inventor, if any: see above

GIVEN NAME/FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Residence (City, State & Country)		CITIZENSHIP
MAILING ADDRESS (Complete Street Address including City, State & Country)		

Full Name of Eleventh Inventor, if any: see above

GIVEN NAME/FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Residence (City, State & Country)		CITIZENSHIP
MAILING ADDRESS (Complete Street Address including City, State & Country)		

Full Name of Twelfth Inventor, if any: see above

GIVEN NAME/FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Residence (City, State & Country)		CITIZENSHIP
MAILING ADDRESS (Complete Street Address including City, State & Country)		

*DATE OF SIGNATURE

I hereby appoint the following attorneys to prosecute this application and/or an international application based on this application and to transact all business in the Patent and Trademark Office connected therewith and in connection with the resulting patent based on instructions received from the entity who first sent the application papers to the attorneys identified below, unless the inventor(s) or assignee provides said attorneys with a written notice to the contrary:

Raymond C. Stewart	(Reg. No. 21,066)	Terrell C. Birch	(Reg. No. 19,382)
Joseph A. Kolasch	(Reg. No. 22,463)	James M. Slattery	(Reg. No. 28,380)
Bernard L. Sweeney	(Reg. No. 24,448)	Michael K. Mutter	(Reg. No. 29,680)
Charles Gorenstein	(Reg. No. 29,271)	Gerald M. Murphy, Jr.	(Reg. No. 28,977)
Leonard R. Svensson	(Reg. No. 30,330)	Terry L. Clark	(Reg. No. 32,644)
Andrew D. Meikle	(Reg. No. 32,868)	Marc S. Weiner	(Reg. No. 32,181)
Joe McKinney Muncy	(Reg. No. 32,334)	Donald J. Daley	(Reg. No. 34,313)
John W. Bailey	(Reg. No. 32,881)	John A. Castellano	(Reg. No. 35,094)
Gary D. Yacura	(Reg. No. 35,416)		

Send Correspondence to:

BIRCH, STEWART, KOLASCH & BIRCH, LLP or Customer No. 2292
P.O. Box 747 • Falls Church, Virginia 22040-0747
Telephone: (703) 205-8000 • Facsimile: (703) 205-8050

PLEASE NOTE: YOU MUST COMPLETE THE FOLLOWING:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of First or Sole Inventor; Insert Name of Inventor; Insert Date This Document is Signed

Insert Residence; Insert Citizenship; Insert Post Office Address

GIVEN NAME/FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Andre ROSENTHAL	Andre Rosenthal	Jan. 17, 2001
Residence (City, State & Country)		CITIZENSHIP
Berlin, Germany DEX		German
MAILING ADDRESS (Complete Street Address including City, State & Country)		
Gormannstr. 24, 10119 Berlin Germany		

Full Name of Second Inventor, if any: see above

GIVEN NAME/FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Thomas WIRTH		Jan. 4, 2001
Residence (City, State & Country)		CITIZENSHIP
Wurzburg, Germany DEX		German
MAILING ADDRESS (Complete Street Address including City, State & Country)		
Rotkreuzstr. 7, 97080 Wurzburg Germany		

Full Name of Third Inventor, if any: see above

GIVEN NAME/FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Andreas RUMP		Jan-18,2001
Residence (City, State & Country)		CITIZENSHIP
Jena, Germany DEX		German
MAILING ADDRESS (Complete Street Address including City, State & Country)		
Leutraer Weg 3a, 07745 Jena Germany		

Full Name of Fourth Inventor, if any: see above

GIVEN NAME/FAMILY NAME	INVENTOR'S SIGNATURE	DATE*
Jochen HESS		Jan. 9 2001
Residence (City, State & Country)		CITIZENSHIP
~~Unterpleichfeld, Germany~~ Meckesheim-Monchzell, Germany		German DEX
MAILING ADDRESS (Complete Street Address including City, State & Country)		
~~Sterngasse 4, 97294 Unterpleichfeld, Germany~~ Weihergartenstr. 38, 74909 Meckesheim-Monchzell, Germany		

*DATE OF SIGNATURE

SEQUENCE LISTING

<110> ROSENTHAL, ANDRÉ et al.

<120> Nucleic Acid Molecules encoding proteins which influence bone development

<130> 0147-0211P

<140> PCT/EP99/02055
<141> 1999-03-26

<150> DE 198 13 799.0
<151> 1998-03-27

<160> 21

<170> PatentIn Ver. 2.1

<210> 1
<211> 1550
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (2)..(1180)

<400> 1

```
c ctc ggc cga agt aaa gta gct gct gag aga gcc aca agt gtc tac ttg  49
  Leu Gly Arg Ser Lys Val Ala Ala Glu Arg Ala Thr Ser Val Tyr Leu
    1               5                  10                  15

gtc cag aag gtg gtc ccc atg ctt ccc agg ctt ctg tgt gag gaa ctc   97
Val Gln Lys Val Val Pro Met Leu Pro Arg Leu Leu Cys Glu Glu Leu
            20                  25                  30

tgc agc ctc aac ccc atg act gac aag ctg acc ttc tct gtg atc tgg   145
Cys Ser Leu Asn Pro Met Thr Asp Lys Leu Thr Phe Ser Val Ile Trp
        35                  40                  45

aag ctg acc cct gaa ggc aag atc ctt gaa gag tgg ttt ggc cgc act   193
Lys Leu Thr Pro Glu Gly Lys Ile Leu Glu Glu Trp Phe Gly Arg Thr
    50                  55                  60

atc atc cgt tct tgc acc aaa ctg agc tac gac cat gcc cag agc atg   241
Ile Ile Arg Ser Cys Thr Lys Leu Ser Tyr Asp His Ala Gln Ser Met
65                  70                  75                  80

atc gaa aat cca act gag aag atc cct gag gaa gag ctt ccc cca att   289
Ile Glu Asn Pro Thr Glu Lys Ile Pro Glu Glu Glu Leu Pro Pro Ile
                85                  90                  95

tct cca gag cac agc gtc gag gag gtg cac cag gca gtc ctg aac ctg   337
Ser Pro Glu His Ser Val Glu Glu Val His Gln Ala Val Leu Asn Leu
            100                 105                 110

cac agc att gca aag caa ctc cgc cgc cag cgc ttt gta gat ggc gca   385
His Ser Ile Ala Lys Gln Leu Arg Arg Gln Arg Phe Val Asp Gly Ala
        115                 120                 125

ctc cgt tta gat cag gag ttc atg ctc ctg gcc aac atg gcg gtg gcc   433
Leu Arg Leu Asp Gln Glu Phe Met Leu Leu Ala Asn Met Ala Val Ala
    130                 135                 140
```

```
cac aag atc ttc cgc acc ttc cct gag cag gcc ctg ctg cgc cgg cat   481
His Lys Ile Phe Arg Thr Phe Pro Glu Gln Ala Leu Leu Arg Arg His
145                 150                 155                 160

ccc cca cca cag acg aag atg ctc agt gac ctg gtg gag ttc tgt gac   529
Pro Pro Pro Gln Thr Lys Met Leu Ser Asp Leu Val Glu Phe Cys Asp
                165                 170                 175

cag atg ggg ctg ccc atg gat gtc agc tct gca ggg gcc cta aat atg   577
Gln Met Gly Leu Pro Met Asp Val Ser Ser Ala Gly Ala Leu Asn Met
            180                 185                 190

gca ctg tac ttc tgc tct ggg atg ctg cag gac cag gag cag ttc cgg   625
Ala Leu Tyr Phe Cys Ser Gly Met Leu Gln Asp Gln Glu Gln Phe Arg
        195                 200                 205

cat tat gct ctc aac gtt ccc ctc tac aca cac ttc acc tct ccc atc   673
His Tyr Ala Leu Asn Val Pro Leu Tyr Thr His Phe Thr Ser Pro Ile
    210                 215                 220

cgc cgc ttt gct gac gtc ata gtg cac cgc ctc ctg gct gct gct ctg   721
Arg Arg Phe Ala Asp Val Ile Val His Arg Leu Leu Ala Ala Ala Leu
225                 230                 235                 240

ggc tac agt gaa cag cca gat gtg gag cct gat acc cta cag aag caa   769
Gly Tyr Ser Glu Gln Pro Asp Val Glu Pro Asp Thr Leu Gln Lys Gln
                245                 250                 255

gct gac cac tgc aat gac cgt cgc atg gct tcc aaa cgt gtg cag gag   817
Ala Asp His Cys Asn Asp Arg Arg Met Ala Ser Lys Arg Val Gln Glu
            260                 265                 270

ctc agc atc ggc ctc ttc ttc gca gtt cta gta aag gag agt ggc ccc   865
Leu Ser Ile Gly Leu Phe Phe Ala Val Leu Val Lys Glu Ser Gly Pro
        275                 280                 285

ctg gag tcc gaa gcc atg gtg atg ggt gtc ctg aac caa gct ttc gac   913
Leu Glu Ser Glu Ala Met Val Met Gly Val Leu Asn Gln Ala Phe Asp
    290                 295                 300

gtg ctg gtg ctg cgc ttt ggg gtg cag aag cgc atc tac tgc aat gca   961
Val Leu Val Leu Arg Phe Gly Val Gln Lys Arg Ile Tyr Cys Asn Ala
305                 310                 315                 320

ctg gcc ctg cga tcc tac agc ttc cag aag gtg ggg aag aag cca gag   1009
Leu Ala Leu Arg Ser Tyr Ser Phe Gln Lys Val Gly Lys Lys Pro Glu
                325                 330                 335

ctc act ctt gtt tgg gag cct gat gac ctt gaa gag gag cca aca cag   1057
Leu Thr Leu Val Trp Glu Pro Asp Asp Leu Glu Glu Glu Pro Thr Gln
            340                 345                 350

cag gtc atc acc atc ttc agc ctg gtg gat gtg gtc ctg cag gca gag   1105
Gln Val Ile Thr Ile Phe Ser Leu Val Asp Val Val Leu Gln Ala Glu
        355                 360                 365

gcc aca gcc ctc aag tac agt gct atc ctg aag cga cca ggc ctg gag   1153
Ala Thr Ala Leu Lys Tyr Ser Ala Ile Leu Lys Arg Pro Gly Leu Glu
    370                 375                 380

aag gcg tct gat gag gag cct gag gac tgaatgctag cccaagccag         1200
Lys Ala Ser Asp Glu Glu Pro Glu Asp
```

385 390

gcctgtgcct gccctaccct gctggctttt aggaatagga ccttttgaca ccaaagggga 1260

tttttaattt ggtttttaac aactcagggg tttgttttta tttttatttt tccttttatt 1320

ttacttttgc agctcagttt ttaaatgaac tggaaggtta ggggtcaggg caggggatgc 1380

tgaggcctgg cctgtgcttc cctgagcaga gaggatccca gtcctcctgg gcaggcagcc 1440

ccgcttctac caggcgaccc actgcccttc cctgcccagg aaatgggggg tttcagcaaa 1500

tcagtgtcat ggaataaaat caagtgtgaa ttgcaaaaaa aaaaaaaaaa 1550

<210> 2
<211> 393
<212> PRT
<213> Mus musculus

<400> 2

Leu Gly Arg Ser Lys Val Ala Ala Glu Arg Ala Thr Ser Val Tyr Leu
1 5 10 15

Val Gln Lys Val Val Pro Met Leu Pro Arg Leu Leu Cys Glu Glu Leu
20 25 30

Cys Ser Leu Asn Pro Met Thr Asp Lys Leu Thr Phe Ser Val Ile Trp
35 40 45

Lys Leu Thr Pro Glu Gly Lys Ile Leu Glu Glu Trp Phe Gly Arg Thr
50 55 60

Ile Ile Arg Ser Cys Thr Lys Leu Ser Tyr Asp His Ala Gln Ser Met
65 70 75 80

Ile Glu Asn Pro Thr Glu Lys Ile Pro Glu Glu Glu Leu Pro Pro Ile
85 90 95

Ser Pro Glu His Ser Val Glu Glu Val His Gln Ala Val Leu Asn Leu
100 105 110

His Ser Ile Ala Lys Gln Leu Arg Arg Gln Arg Phe Val Asp Gly Ala
115 120 125

Leu Arg Leu Asp Gln Glu Phe Met Leu Leu Ala Asn Met Ala Val Ala
130 135 140

His Lys Ile Phe Arg Thr Phe Pro Glu Gln Ala Leu Leu Arg Arg His
145 150 155 160

Pro Pro Pro Gln Thr Lys Met Leu Ser Asp Leu Val Glu Phe Cys Asp
165 170 175

Gln Met Gly Leu Pro Met Asp Val Ser Ser Ala Gly Ala Leu Asn Met
180 185 190

Ala Leu Tyr Phe Cys Ser Gly Met Leu Gln Asp Gln Glu Gln Phe Arg
195 200 205

His Tyr Ala Leu Asn Val Pro Leu Tyr Thr His Phe Thr Ser Pro Ile
210 215 220

```
Arg Arg Phe Ala Asp Val Ile Val His Arg Leu Leu Ala Ala Ala Leu
225                 230                 235                 240

Gly Tyr Ser Glu Gln Pro Asp Val Glu Pro Asp Thr Leu Gln Lys Gln
                245                 250                 255

Ala Asp His Cys Asn Asp Arg Arg Met Ala Ser Lys Arg Val Gln Glu
            260                 265                 270

Leu Ser Ile Gly Leu Phe Phe Ala Val Leu Val Lys Glu Ser Gly Pro
        275                 280                 285

Leu Glu Ser Glu Ala Met Val Met Gly Val Leu Asn Gln Ala Phe Asp
    290                 295                 300

Val Leu Val Leu Arg Phe Gly Val Gln Lys Arg Ile Tyr Cys Asn Ala
305                 310                 315                 320

Leu Ala Leu Arg Ser Tyr Ser Phe Gln Lys Val Gly Lys Lys Pro Glu
                325                 330                 335

Leu Thr Leu Val Trp Glu Pro Asp Asp Leu Glu Glu Glu Pro Thr Gln
            340                 345                 350

Gln Val Ile Thr Ile Phe Ser Leu Val Asp Val Val Leu Gln Ala Glu
        355                 360                 365

Ala Thr Ala Leu Lys Tyr Ser Ala Ile Leu Lys Arg Pro Gly Leu Glu
    370                 375                 380

Lys Ala Ser Asp Glu Glu Pro Glu Asp
385                 390
```


<210> 3
<211> 1140
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (2)..(781)

<400> 3

```
g atc cac cgc gcc ttc ccc gag cag gcc ctg ctg cgc cgg cac ccc ccg 49
  Ile His Arg Ala Phe Pro Glu Gln Ala Leu Leu Arg Arg His Pro Pro
    1               5                  10                  15

ccc caa aca agg atg ctc agt gac ctg gtg gaa ttc tgc gac cag atg   97
Pro Gln Thr Arg Met Leu Ser Asp Leu Val Glu Phe Cys Asp Gln Met
            20                  25                  30

ggg ctg ccc gtg gac ttc agc tcc gca gga gcc ctc aat atg gca ctg   145
Gly Leu Pro Val Asp Phe Ser Ser Ala Gly Ala Leu Asn Met Ala Leu
        35                  40                  45

tac ttc tgc tcg ggg ctg ctg cag gac cca gcg cag ttc cgg cac tac   193
Tyr Phe Cys Ser Gly Leu Leu Gln Asp Pro Ala Gln Phe Arg His Tyr
    50                  55                  60

gcg ctc aat gtg ccc ctg tac aca cac ttc acc tcg ccc atc cgc cgc   241
Ala Leu Asn Val Pro Leu Tyr Thr His Phe Thr Ser Pro Ile Arg Arg
```

```
65                  70                  75                  80

ttt gcc gac gtc ctg gtg cac cgc ctc ctg gct gcc gcg tta ggc tat   289
Phe Ala Asp Val Leu Val His Arg Leu Leu Ala Ala Ala Leu Gly Tyr
                85                  90                  95

agg gag cga cta gac atg gcg ccc gat acc ctg cag aaa cag gcg gac   337
Arg Glu Arg Leu Asp Met Ala Pro Asp Thr Leu Gln Lys Gln Ala Asp
            100                 105                 110

cac tgt aac gac cgc cgc atg gcg tcc aag cgc gtg cag gag ctc agt   385
His Cys Asn Asp Arg Arg Met Ala Ser Lys Arg Val Gln Glu Leu Ser
        115                 120                 125

acc agt ctc ttc ttt gct gtt ctg gtc aag gag agt ggc ccc ctg gag   433
Thr Ser Leu Phe Phe Ala Val Leu Val Lys Glu Ser Gly Pro Leu Glu
    130                 135                 140

tca gaa gcc atg gtg atg ggc atc ctg aag caa gcc ttc gac gtg ctg   481
Ser Glu Ala Met Val Met Gly Ile Leu Lys Gln Ala Phe Asp Val Leu
145                 150                 155                 160

gtg ctg cgc tac ggc gtg cag aag cgc atc tac tgc aac gca ctg gcc   529
Val Leu Arg Tyr Gly Val Gln Lys Arg Ile Tyr Cys Asn Ala Leu Ala
                165                 170                 175

ctg cgg tcc cac cac ttc cag aag gtg ggc aag aag ccg gaa ctc acg   577
Leu Arg Ser His His Phe Gln Lys Val Gly Lys Lys Pro Glu Leu Thr
            180                 185                 190

ctg gtc tgg gag cct gag gac atg gag cag gag cca gca cag cag gtc   625
Leu Val Trp Glu Pro Glu Asp Met Glu Gln Glu Pro Ala Gln Gln Val
        195                 200                 205

atc acc atc ttc agc ctg gtg gag gtg gtc ctg cag gca gag tcc aca   673
Ile Thr Ile Phe Ser Leu Val Glu Val Val Leu Gln Ala Glu Ser Thr
    210                 215                 220

gcc ctc aag tac agc gcc atc ctg aag cgg cca ggc acc cag ggc cac   721
Ala Leu Lys Tyr Ser Ala Ile Leu Lys Arg Pro Gly Thr Gln Gly His
225                 230                 235                 240

ctg ggc cct gag aag gag gag gag gag tct gac ggt gag ccc gag gac   769
Leu Gly Pro Glu Lys Glu Glu Glu Glu Ser Asp Gly Glu Pro Glu Asp
                245                 250                 255

tca agc acc agc tgagctccac cagccgcctg ccccgcctgc cccgcctgcc       821
Ser Ser Thr Ser
            260

tgtcccgcca cactggcttt aggacctgtt gacacggagg ggggttttta atttggtttt 881

taacaactca ggggtttgtt tttatttta tttaattttt gcagctcaac ttttaaacaa 941

actgcagggg agagggtggg gctggaagga aggctgaggc ctggtcagca gtgaccccag 1001

cagagcaggc cccagtcctc ctgggaggct ggccccccct ttttctgggc cctactgccc 1061

tcctctgccc aggaaatggg ggggtttcag caactcagtg tcacagaata aaatcaagtg 1121

tggagtgcca taaaaaaaa                                              1140
```

<210> 4
<211> 260
<212> DNA
<213> Mus musculus

<400> 4

```
Ile His Arg Ala Phe Pro Glu Gln Ala Leu Leu Arg Arg His Pro Pro
  1               5                  10                  15

Pro Gln Thr Arg Met Leu Ser Asp Leu Val Glu Phe Cys Asp Gln Met
             20                  25                  30

Gly Leu Pro Val Asp Phe Ser Ser Ala Gly Ala Leu Asn Met Ala Leu
         35                  40                  45

Tyr Phe Cys Ser Gly Leu Leu Gln Asp Pro Ala Gln Phe Arg His Tyr
     50                  55                  60

Ala Leu Asn Val Pro Leu Tyr Thr His Phe Thr Ser Pro Ile Arg Arg
 65                  70                  75                  80

Phe Ala Asp Val Leu Val His Arg Leu Leu Ala Ala Ala Leu Gly Tyr
                 85                  90                  95

Arg Glu Arg Leu Asp Met Ala Pro Asp Thr Leu Gln Lys Gln Ala Asp
            100                 105                 110

His Cys Asn Asp Arg Arg Met Ala Ser Lys Arg Val Gln Glu Leu Ser
        115                 120                 125

Thr Ser Leu Phe Phe Ala Val Leu Val Lys Glu Ser Gly Pro Leu Glu
    130                 135                 140

Ser Glu Ala Met Val Met Gly Ile Leu Lys Gln Ala Phe Asp Val Leu
145                 150                 155                 160

Val Leu Arg Tyr Gly Val Gln Lys Arg Ile Tyr Cys Asn Ala Leu Ala
                165                 170                 175

Leu Arg Ser His His Phe Gln Lys Val Gly Lys Lys Pro Glu Leu Thr
            180                 185                 190

Leu Val Trp Glu Pro Glu Asp Met Glu Gln Glu Pro Ala Gln Gln Val
        195                 200                 205

Ile Thr Ile Phe Ser Leu Val Glu Val Val Leu Gln Ala Glu Ser Thr
    210                 215                 220

Ala Leu Lys Tyr Ser Ala Ile Leu Lys Arg Pro Gly Thr Gln Gly His
225                 230                 235                 240

Leu Gly Pro Glu Lys Glu Glu Glu Glu Ser Asp Gly Glu Pro Glu Asp
                245                 250                 255

Ser Ser Thr Ser
            260
```

<210> 5
<211> 49999
<212> DNA
<213> Mus musculus

<400> 5
gatcaagtcc agaacctcac actgaaaccc aagccttgtg atgttcttag tggtgacatt 60
cttattcacg tagtaaatat tgaatggtat ttgttgcact cagataccat acaaggtatt 120
gaaaatctca gacatttccc catccagaca gaagtccatc tttcctagtt gtagttgtct 180
attctccctt tcccctggct gcatgtttta aatttcttac agtaaaggca tattgcaact 240
taaaagcaaa agtcattttg agacattttc gcctgttttt taataagtag atgagatatt 300
ggagtgcatt tgtaggctga gtgaaagaca gacaaagtga ggaaggagtc acagtttggg 360
agcctggtaa agaaggactc agcctatgag agcaatgagt tcccacagga caagggtcag 420
ctcttctcct accttgacta gaataaaggg aggggctggg aatggggctc agtagaccat 480
gggaaggtga ttcgatgctc cctgtcaggt tccccagggg taaatgtcat tttccctgca 540
ctccagggcc agttctgttc cattctgttc tcctgccaga ctctttttt ttttttaca 600
gttttttta attaggtatt ttcttcattt acatttcaaa tgctatccca aaagaccccc 660
catacctcc cccccattcc cctacccacc cactcccact tcttggccct ggtgttccct 720
tgtactgggg catataaagt ttgcaagacc tatgggcctc tcttcccaat gatggccgac 780
taggtcatct tctgaaacat atgcagctag agacacgagc tctggaggta ctggttagtt 840
catattgttg ttccacctat agggttgcag acacctttag ctccttgagt acttcctcta 900
gctcctccat tgggggccct gtgttccatc caatagctga ctatgagcat ccacttctgt 960
gtttgccagg catcgcatag cctcacaaga gacagctgta tcagggtcct ttcagcaaaa 1020
tcttgctggt gtatgcaatg gtgtcagcat ttggaggctg attatgggat ggatccccgg 1080
gtattcctgc cagactctta agcccggacc agagttttac gtcttcctca tagttcagtg 1140
ccctctaccc agaaaacact ttgccttggt tttcactgtt ctgtttattc ctgttgctta 1200
gtgagatggt gggccccaaa taagcatgtg catccccagc agccacccca atcctatgaa 1260
cttgcatgct gggagttgtg gagtgtctca ggtagccctg ccatgcttcc ccacagagct 1320
gctcttcatt tccttaatga cccctgtgga ctttcatacc attaacctgc cagatgccac 1380
cactgaaaag cttgtattct tcctgggcta ctgtggtcca aagcaagact cccacagtgc 1440
catgtagctt aaggctttcg ctaaaagcag tgctaggtgc tgtgtttcat acctaggcac 1500
cctactaaat acctgagaaa ctccaggagg aagtagcttc aaagcctagt tctgagaatc 1560
agaaattgtt cccataatct ctcctcttag tcactacaag gggcagagcc tagctgtttt 1620
atttcaggac tgtcggtggg acctctgtag caagggaggg atggaaggag ctgctgttcc 1680
atatccctca agtcccagtt ttccactgaa gacaccagcc agctagatgg cttccctaag 1740
gtcacatcag aggagcaacg gaactcagtt gtgaagcagt gaagcttgag gatgaaaagc 1800
agaatccaaa atgaaacatt ttcaagatat gaaatgaggt gtttgtttca gtaagcagca 1860
gaaaaggtta tggtgtggag tgtcttttca aggacaaggg gctttatgag ctggcttaca 1920
atggacctgt tcaaaggaag gctggggtac taggttcacc aggcagaagg tatctgtgat 1980
gtttcctgga tccagaattc ccccaccccc cacccccact gctacttccc acattctcct 2040
tctttctccc tcccctcctc cagtttcctt tctgtacaga gagatgagtc ccaaacatga 2100
gcctttaatg ggggactttt gggatagcac tggaaatgta aacgaggaaa atacctaata 2160
aaaaatattt aaaaaaaaaa gatgcctcct gccagtcttg aggacagtgg aacactttga 2220
agattatacc tgcttgagta cctttaccca ctgttacggg aacacaattc ctatctcctg 2280
gccacagcta gagtttcggc tccctctagc ccaatggttc tcagccttcc tgatgctgca 2340
acccctttgat acagttcctc atgttgaggt gacccccaac cataaaatta tttcatagct 2400
acttcataac tataactttg gtgctgttat aaaccctaat gttagcaacc aacatacagg 2460
atgtctgata taatcccaaa ggggttgcaa cccacagatt gaaaacccct gatctagatg 2520
ctgtatgtgg caaagatttg gtttcctctg cttccttgtc tttggtttag aagcttacat 2580
agctgtcatc agatcaggat gggaaaggac ctaatctctc ttgagactga aggacaagcc 2640
agtgagtgat aagattgtat agttaattcc agcttcttct ctatgcagac tctaccatgt 2700
gcacaaactg acttagaacc caaacaggct ggctaacttg gaaccagcca acctgtgttg 2760
ctgggcttct aaggcactgg tcctttccca gccactggtg gtcttgacac agcaagagca 2820
agcctgtgag atgaaaggag ctgctgctgg tgggaggcag ccttgccaca gtttcattct 2880
gccctgctgt ctttctcttg ttgtcagtct cattctgtca cctcaggcct cagttgagag 2940
agggcctaat gaaggaggac ccccaaccct gccccctgct tatatgaagc caccccatag 3000
tttctgacta gttagtcaca ggtcattcca taaggaatca gctttccttc catcaagcaa 3060
cctcctgccc tttgctgtcc ccgcctctcc acctctgccc aagtcatttt cagacacttt 3120
gttcttgaca ccttttactg tccttttggc caggatggct gggatggcca ggacggccat 3180
gttggctggg atagccatgt tgaccagact agccttgcct tcatagcttt aagaagcagc 3240
agcaatctgc tgcccccagg caccaccacc actccagaca gcctgctttt gttccagtca 3300
ggaaagtgct tctttctgcc ttccaggctt tttgaactaa aagttctgta tgaggaagcc 3360
cagaggttca gaactcattt cacatctagt tatttaaaat ttaaaattag ctctattagt 3420
agtttttga accaaatatg tctcaatgag ttaatatttt tcagagaata atttttaaaa 3480
agttcatgga ataggacgga ggtccaaagg tttcttcacg cctttatatc tataaattgt 3540
agaaatgagg tataattgta gaaatatatt tgaggtatat tttgattctc atcatctacg 3600
ttacgacctt ccgctaaaaa gaaaaaagtg tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg 3660

tgtgtgtgtg tgtgcgcgca cacacacatc cacatgaatc cactatatat atatatattt 3720
tttttactct gaaccttcag gtatggacct aagagtttgc atgattcttg agtatttccc 3780
acctgattgc ccagcttccc ctggtgtgtc aaagtgatgc tcaaaggctg tgtacctgag 3840
gctgggacca gcagcactga gtaggtcagg aggggatacc tccttagata atgggtttct 3900
cagccatgtg tcttcagtct gtggagagac tgtgcttaag ctgacattct gaacagtggc 3960
accccacagt atgtgctaga atcctgtgta gagttcagtg tggcctgaat cctgtggtta 4020
tgcaaaggag gcaggacacg atctcctcag gggtactgtc catgtgttcc ctcctccttt 4080
tttttttcta ccttttccat gaaaagccct ttgtcttctg ccactggctc tggttatgga 4140
cttggtgttg atgtgagtac agttttcaga ttggaaatta atgaggtgtt ccattgagag 4200
aagcctgact tctaccctgg ctggctgctc ccaggtttcc tccatgtggg tctttgctgc 4260
tttctctgtg ggcagctgcc cttggctggc attcttctat tggctttccc cagaggtact 4320
ttcaagactg ctttcccagg ctagaaacta ttctagtaca tgtcagctgt gcctcccaca 4380
agtcccaagc catggtaaag ccagacagcc ttggctgaga agggaagttc gaaaaggctc 4440
tcctttgtat gtttgtgaag aagggatgaa gggcaaaaga ggaagggaaa tcaggtaaag 4500
atgctatgga aaccagcacc taaagtagaa agtttggtag tgtccatgtg ggcattggag 4560
aaaggctgtc ttgacaagaa ggaaacaaag aagcagaggt acctattagg tagaacaggt 4620
gcttctaata agatagtgta ctattagtag gcatgtagcc aggctctggt gaggaatagt 4680
aggcaacata gggtgacaca tggctgctag tcagggctca acaatcagag gggactaagg 4740
aagcaactga tgtgtagagc caagacatgt gggcatgtag gcagaagaac atctaagagc 4800
tttgtacagc ttactgtaaa ggtttgtgca taaaacttag aatgctctga gcactcatca 4860
gattctacag ctgttcttgc tccaactttg tacagcagaa atctgctaat tgtgtagtag 4920
ttaccttcac ttgagtgtca tgtactagga aggaggatgc aggccacagg aggacagata 4980
tcaagacctg agtgtgggga ggagttcatg agctagctca ctgggaggtg taggaatgaa 5040
aagggtggca cacaatgtaa gctgccacca tctgtcagca ggctgaaaac agactgccta 5100
acacacatgt acacaggact gagctgaggg agaactcatt tgggaagaaa attaagaaaa 5160
gaaagaagca tagtgtccac acttcagtct tcatttttct tgagtttcat gtgtttagga 5220
aattgtatct tatatcttgg gtatcctagg ttttgggcta atatccactt atcagtgagt 5280
acatattgtg tgagttcctt tgtgaatgtg ttacctcact caggatgatg ccctccaggt 5340
ccatccattt ggctaggaat ttcataaatt cattcttttt aatagctgag tagtactcca 5400
ttgtgtagat gtaccacatt ttctgtatcc attcctctgt tgaggggcat ctgggttctt 5460
tccagcttct ggctattata aataaggctg ctatgaacat agtggagcat gtgtccttct 5520
taccagttgg ggcatcttct ggatatatgc ccaggagagg tattgctgga tcctccggta 5580
gtactatgtc caatttttctg aggaaccgcc agacggattt ccagagtggt tgtacaagcc 5640
tgcaatccca ccaacaatgg aggagtgttc ctatttctcc acatccacgc cagcatctgc 5700
tgtcacctga atttttgatc ttagacattc tgactagtgt gaggtggaat ctcagggttg 5760
ttttgatttg catttccctg atgattaagg atgttgaaca ttttttcagg tgcttctctg 5820
ccattcggta ttcctcaggt gagaattctt tgttcagttc tgagccccat tttttaatgg 5880
ggttatttga ttttctgaag tccaccttct tgagttcttt atatatgttg gatattagtc 5940
ctctatctaa tttaggatag gtaaagatcc tttcccaatc tgttggtggt ctctttgtct 6000
tattgacggt gtcttttgcc ttgcagaaac tttggagttt cattaggtcc catttgtcaa 6060
ttctcgatct tacagcacaa gccattgctg ttctgttcag gaatttttcc cctgtgccca 6120
tatcttcaag gcttttcccc actttctcct ctataagttt cagtgtctct ggttttatgt 6180
gaagttcttt gatccattta gatttgacct agtgtggaca ctatgcccct ccttagaagt 6240
gggaacaaaa caccttgga aggagttaca gagacaaagt ttggagctga gatgaaagga 6300
tggaccatgt agagactgcc ttatccaggg atccacccca taatcagcat ccaaacgctg 6360
acaccattgc atacgctagc aagattttat cgaaaggacc cagatgtagc tgtctcttgt 6420
gagactatgc cggggcctag caaacacaga agtggatgcc cacagtcagc taatggatgg 6480
atcacagggc tcccaatgga ggagctagag aaagtaccca aggagctaaa gggatctgca 6540
accctatagg tggatcaaca ttatgaacta accagtaccc cggagctctt gactctagct 6600
gcatatgtat caaaagatgg cctagtcggc catcactgga aagagaggcc cattggacac 6660
acaaacttta tatgccccag aacaggggaa cgccagggcc aaaaaggggg agtgggcggg 6720
taggggagtg ggggtgggtg ggtatggggg acttttggta tagcattgga aatgtaaatg 6780
agctaaatac ctaataaaaa atggaaagga aaaaaaaaaa agaaaagaaa gaagctacgt 6840
ctctagagaa aacttttttt ttttttttt ttttttttg gtttttcaaa acagggtttc 6900
tctgtgtata gtcctggctg tcctggaact cactctgtag accaggccgg cctatgcctc 6960
ccaactgctg ggattaaagg catgcgtcac cactgcccgg ccaggggaaa ctttgagacc 7020
acaagaatga agaggtcaga gccattttcc ttatgaagga ggctgaggct ccattcagga 7080
attgtgggta tgctcggatc tcaagcctgg tcacttggat ggcttcttgt agagaccttt 7140
agctgcatct gtctccaaac tgcttcccaa cccctggaac gggctctgaa gctgtccttg 7200
cctatagcat gcaaggcctt gtgagtacca ggtatgaggc ctgattgcta gagaagacag 7260
gatctcatag agtctcttgc tatttgcaat agggatcatt cttggaataa tccgaaaagt 7320
agagtttaag aaattttgaa gaaaaaaaaa tctaatatta cagattccag acttgttata 7380
tagaagaaga agaagaggag gaggaggagg aggaggagga agaagaggaa gaagaagagg 7440

aagaagaaga ggaagaagaa gaggaagaag aagaggaaga agaagaagaa gaagaagaag 7500
aagaagaaga agaagaagaa gaagaagaag aagaagaaga agaagaagaa gaagaagaag 7560
aagaagacga ggaggaggag gaggaggagg gggggggggaa gaggaagaaa gaagaagaag 7620
gagacggaga gaagaagaag gagaaggaaa aagagaagaa gaagaaggag aaggagaaag 7680
agaaggagaa gaaggaggag gaggagaagg agaagaagaa gaagaagaag aagaagaaga 7740
agaagaagaa gaagaggagg aggaggagga ggaggaggag gaggaggagg aggaggaaga 7800
aaagtgaaca gtagggattg gagagatggt tcagtggtta agagcactga ctgctcttct 7860
ggaggtcctg agttgaattc ccagcaacca catgatagct cacaaccact tgtaatggga 7920
tccgatgccc tcttctggtg tgtctgaaga cagctatagt gtacttgtat taataaaaat 7980
aaataaatct tttttaaaat tttttttaaa ataatgtgaa cagtaactgc tgttctccaa 8040
gtgcccctgt tgtcattttt aaaaagccat agttctttct ttcatggagg gtgatcaatc 8100
acaagggtca ctgcatacat ctaggataga agctgtgtta catagattcg gtgtgtggag 8160
agttgctgag ttcctctctt tccttctttc tcaaaggtat cagccaggcg tcatagtccc 8220
atctcgtgtc tcaggcagct atcctatctt ctcttccctc tttgtgacat tgatgaccat 8280
tcatccaaac aaatggaaac acttcccatg ggccattcag tgcaagtctt ccacgtggcc 8340
ttgctttgtg ctggggaaga gtgtagacct cagctgtctc ttgaattctg ctagggcctg 8400
gtagtctaaa ctgccagaag gcagcaacct ctgcattttg ttcatccatg tggcaccagt 8460
cagtgttgag agagagagag aggagagaga gagagattaa gtacagtctg tctttgcaga 8520
tccttgaaga gtggtttggc cgcactatca tccgttcttg caccaaactg agctacgacc 8580
atgcccagag catgatcgaa aatccaactg agaagatccc tgaggaagag cttcccccaa 8640
tttctccaga gcacagcgtc gaggaggtgc accaggcagt cctgaacctg cacagcattg 8700
caaagcaact ccgccgccag cgctttgtag atggcgcact ccgtttagat caggtcagtg 8760
agtctctttt gttttatgtg gtcttgagtt tggcttgtgc ccaaaactca agggtgagaa 8820
atatcctggt ggcctctttc tctccaccta tttcccctgc ccctgccaca ccatggtaat 8880
atgagttagg gtaagatggt atctgtgtac agagttctgt gactcccagc tgctcttacc 8940
tggaaaacct gtgtccatga ttgaattctc acttgtagat ggcattgctg tgacaggtcc 9000
ctgggacaaa gaagggagga aggacatatt tttggcttgt ggtttcagag gctcttggaa 9060
catagctctg ttgtttctgg cccatagttg ggggcggggg gtggcatgtg agaagtatgt 9120
ggcccagtgg agctgcttgt ctcatggcag ccagtaagca gagagacaga ggcatgtgaa 9180
ggagcagagg caagatagac tttccagggt acacccccag tgatatcaat gaatccaaca 9240
gctggttctt tgagaagata agcaagattg acagaccctt ggtccaagta gccaaaagaa 9300
ataaagaagg cccacattaa cagagtcaga aatgaacagg gaaacattac aacagatgcc 9360
taagaaattc agagtttcat aagggcatac tttaaaaaac tgtactctat tagaaatgga 9420
tgagtttcta gattcagcca aaccaccaaa attaaaccaa aaagaagtca acaacctaaa 9480
cagacccata acaaataaga ttgaaacagt aaaaacaaaa caaaacaaca aaaaacttcc 9540
agctacaaag aaaaatctag ggccagatgg attcacagga aaattttacc agatgttcaa 9600
agaagatttg caccgagttg tccttaaact attcaaaaag tagaggcaga gggagcactc 9660
ccaggtctcc tctgtgaagc ctttatgtca ccagttctct ccgctcatgg agattacttc 9720
ctctgctcct tgcttcatgc ttggtgtcct gaggctgcag cccaccatcc tgtcatctcc 9780
accaacagtc cctccctgat tccaagaggc taagttgatg ctaatgacac cagaacttgt 9840
gtctgacctt tctccctcac tcaagcctag cttctttacc tgccttatct gcctgactgc 9900
ccttcagcag cacagtggtg ctcactcacc cttccttctg cagaaagcag tgcttgatgc 9960
ccacagcatg gcacacaggc ttcccagcat cctcttctcc cactgataca ctggagcatt 10020
atatatgtgc ccccaaccca agtgtaccag tcgcacagat ttttgtaatt atgcttagac 10080
taaacattag acagacagat catatacaac tctcaaaagg aagctgttta ttctgtaaac 10140
acatccatgt tttagaaaga caagtcttca gaatgtcttt aggaagactg aagtcacttt 10200
acaaatgaac cgtggggctt aggaaagtct ttagaaaatg aattgggttt agttttctca 10260
aaaagactag gaatctatga tgttggcacc tataatctca tctctcagga agccaaaaca 10320
ggaagattga aagttcaagg ccatataaga tgtatgtcaa gatcatgtgg caaggaagaa 10380
taagaggagg aagcagagga ggaggaagag gaagaggagg aagaggagga agaggaggag 10440
gaagaggaag gaggaggagg aaggaaggtg gagagaaagg caataaaaag aataaattta 10500
gttttctctc actctgtagc tcaggttgaa cttgaactca tggctagccc cctgcctcag 10560
cttcccaaat ggtaggatta taggtgtgag ccaccaaacc agatactaac ttgtattctt 10620
taagtcttac tttttttcaa aaatggttta gaaacatata tctatgtaaa ttaagttata 10680
atacaaaatg ttaggttgta tattatgtat gccttttctg catgattctc ttatttactt 10740
aacttttaca atgaaaaacc agctgttacc caagcccatc aaatgaggaa gtttctgaag 10800
taccatttcc agatgtttcc ccactaagat gctataataa aattcaactg gattaattca 10860
tctgtgaaac tggagggagg gggagaaaat agcggcaact tatctctgtc ccattggaag 10920
aggtgtggtc atcatcgtaa tgaccataga ttattgatgg agaatgagca gttagtatgt 10980
ctgatactca gaattgtatt actgaaaaga ctttagatat ctgtatccca gtgggcctcc 11040
taactcataa atgagaaggc tgaggtcccc acaggtagat gggttgctta ttgccaggca 11100
tccaagtagc tctttgtttg gttttcctcc atttattaca ctatgctgac ataagagaaa 11160
aaagtttgcc tttaaagtga aaggggaaaa caccctcaaa aacctaatta ggttccagtt 11220

aattaaggtt tgaaagtaat gaatttgtat ccttggagtt gatcccttca ttcgccagaa 11280
aacaagtctg tagaccccca cataagatgg agacatcaat ctttgcagcc aaggacactg 11340
gtgaggccgt ttataaatca gctaaatggc tttattcaga agccctgcgt ttgttctccc 11400
gtccctgttg ccttctttgc cctcacaagt tcatttttcc ttggtgcctt ttcagtggcc 11460
tgctgtttgc cattgttctc tgaagctttg tctgccatag ttcactgtgt ccatgttttg 11520
ggtggtagtc ctttaaaaag cacatccttt tatgtcagca gcaattagag atcggtcttc 11580
agccaatcca aaggctttgc ctttcaaaaa aacaagggtt gaagaacccg aaaaagaaca 11640
aagaagaaag cccaagcaac aaaaaggggc ctggttgcaa aagcaaaaaa aaaagcccca 11700
aaaaggcaaa aaggcaaaac aaactgccca accaaaaccg aatttaaaaa aagtttcctc 11760
caaaaggtga ttctcctttg ccccaaaagc aacacaggct tccaaggcta tctagtgatt 11820
tttggtcgct gagttgaatg atgacccttc tgagtggctt gtctctgaat ccatgttttc 11880
agctaccagg gtagttcaag gacttggtac aaatgaccac tttaattatt tgtttataat 11940
atatgtctct cccgaatctt aaaagaggcc ataatggggc caagacttct gtatctgtag 12000
aagaaaagga atcacagtgg ttcctaatat ccatatactg agtttgatgc aaggggagcc 12060
atctgagggt ttttgctcct gactagcaca ggccagccct cagcagctgc catctagggg 12120
ggaagataga tctgcctggc atgggtgtat ttaaaaccct gaaacccttt tggggttcta 12180
ggtcagctat tgccttcaga aaggatatga tggtaaggta atggggtgcc aaacagatcc 12240
tcaatataag actaacattg gctgatgtca ggaaactcca cgccctgctt tctgaagctc 12300
tctgaacctg tttctcttca gccaggctaa gacttctatg tgaaacaaac tagaagtttg 12360
cagagatcag acaagttctc ccagcaggca gttaaaacta tgaattcgga gggccttgga 12420
agtcaaatga aaaaaacctg agaaaaattc atataaagta aaggaggctt tactaagttc 12480
tcagctctgt catctctgaa acctacttga cacagttttg aggcccaagc tccatgcagt 12540
ttctttgtaa aggtagcctt tctaatggaa gacacttttg aataccctgg gactcaagct 12600
gtgtgagtct gtaatgtttg atcctaacct agcatagcct ttcaatcagt gttggcaggc 12660
tttcccagga aaggccagac agtaaatgac atgagctcct ggtccatatg gtctgtctct 12720
gactcagccc tgcctgttaa tgtgctccaa atgaatgggg gtagttgaag gtcactaaga 12780
cttggatttg atatcatttt cacagaccac aaaatattat tcttcatttg attatttttc 12840
aagtatttaa aaatgtaaaa attcttcttt gctccccggc catgcaaagc aagttaaact 12900
gtgtcccaca catcactgac cctgcttaac tgaccaacaa gcttttcagc cctattaccc 12960
gccaagcctt gagcagctca ttaccacttc cccaggaagc caggctagga aatggagaac 13020
agttgggcta agtgacttct caggatggtt ccatacaatt aagtaaatta ttcttttgat 13080
tagtaccacg cttagggggc cagttggagg ctggaagtaa gagtgactga ccccccaacc 13140
ccagcacagt tcttttgccc ttcccaaggt ccagtccctt tagcttgaag ccaaagagtc 13200
agcactctct ttactcctct gcaggaccct cagggtcaga gcagccctcc ctctcccctc 13260
ccctagctcc cccttctcct tccctcccct ggtcctctga aggtagagac tactccagga 13320
agagcaggct atgaggaagg tgggtagctt ctctcctggc tacctgtctg cagtgctaat 13380
tacagcagag tgttccttct ctctgccata gatagctgca ttctggatgg ctgctgctca 13440
gtgttgctct ccgatgacat tggtgtagct gtggagaatg ggcaagccct tctggtttcc 13500
tttagcttta gtgtctgtgt caactcaaag tacaacatag tccaaggccc aggctctgag 13560
gtttttcatt cagagagttc ttcactcagc atagcttcag agacctgttt ggggagccca 13620
gtgtgtgtgg agggggtgag aatgtaaatg aggaatgaga agtttcaggt atgggaaggg 13680
aggcagtgaa ccactagaca gtaagaagca ctgggtggaa gtgcttgctg aacttgaaac 13740
tgaggaatga ctcctgccca aaaccagtgc tcatccttag aaccctgaag aaatccatgt 13800
gcctgaagca tactgtctta gttagggttt tactgctgtg aacagacacc atgaccaagg 13860
caagtcttat aaaaaacaac atttaattgg ggctggctta caggttcaga ggttcagtcc 13920
attatcatca aggtgggagc atggcagtat ccaggcaggc atggcccagg aggcactgag 13980
agttctatgt cttcatccaa aggctgctag tggaaaactg acttccaggc aactagggtg 14040
aggatcttat actcacaccc acagtgacac acccattcca accaggtcat acctattcca 14100
acaaggccac accttcagat ggtgccactc cctggtccaa ggatatacaa accatcacac 14160
ataccaagag ctttctgtcc tctctgatct tcagaggaca tcatttgtaa ctcctgtctc 14220
tttgtgcctt tcacttcctg taatatgtca caggagtcat ttgtgttgac cgaaaatccc 14280
tctgttattt atcatacaca cacacacaca cacacacaca cacacacaca cacacacaca 14340
cacacacaca tacacacaca cacagtagct ctgcgactct ttagggtagt gacagtggtt 14400
cagtgggctt ctgctacttc caggccttcc atttaaatgt agacagcaca tggcttcact 14460
tggatattta gcaactcact tatttctcta ctttcctgct tattttcatt tgtagatcca 14520
gctctctgtg acactcagac ctggactctc aggggtagca ggaagggtgg ggagctgcac 14580
ccttcaccac agagaatcag aacacagcct acagtggggt ctggaaacct ttcctttgag 14640
agtgacagat cagtttagtt actgtacatt aatttcatat ggaattacag aaaatagtca 14700
tacttatgca cacatccttc cttgttagat gaatttctct gggtggcttg ttagtaccat 14760
ctgcgctctc cctatactca ctctccctgt gacacaacat agagccattt ctcccacttc 14820
caaaaacttc agaaaatcct gtttaccttg gaagttgtta tgaatgcaga ctgacacttg 14880
accagtggcc attgctaggt gcctcttgag ttctctctcc aacagcagga acactgctcc 14940
taacactgct cctacagcag tgggaagcag atgtcctacc ctaagactgc ataccaagta 15000

gaggagaaca tatggactta gcaaaggagg ccgaggggat ctcaagcacg atggggagtg 15060
gatgggagtg aagggcaagg acaacctgct caagacagct gtgcccactg atgagcatga 15120
gaagagccag aggcagcttc tcctcctctg agctgaggct gagactggac acttgtgaca 15180
cacggaggtg aaagtggctc tgtctacccc gagatggttt agatgaaagg aggcaaaaaa 15240
gtagccagag atagagccac accctctgcc agctggaaca cttgggatgc ttccccactc 15300
ctccacctct gctattacct tgactgttgg gtgtctttcc aggcaggatg tagtgaggcc 15360
tgaagctgga actgctgcag ttggtcaaca ggcctgttca gaagaacact gagtctgctt 15420
tctaagtaac tctagaaagc aagtttggct cctagcccac ctctagaagc ttttgcttgc 15480
cttctggttc actctgcatg ttgatgtcta gcctcatttc ttccaggcca aaaaaaaaag 15540
cattgcttca tgcctgctgc tatattctct gggttcacct ctctctggac ctgaagaatc 15600
tgaatactga aatcctctgc ttgttccaag tggggctggc tcggccaacc ctctctctca 15660
gggtgccata gcccttcatg cctatctttg tcacactgtc cagttgtctt gttacccccc 15720
ctctacccct gtctcctccc ctaagattca gttcctacag agcaaagacc acatgctatt 15780
gatctttcta tcctcacttc ctgaacagtg ctgcatttta acaagctgtt tgttcagggt 15840
ctctaaacag tgccatgcat gctggtcttt ttaaataagg tactgctagc tacagtgggg 15900
agaatggaaa ccaaggctgt agatcagaat gtttgcatga gagagttact atacagtgtg 15960
aaccaaggct gcccaagtaa actggctgtt acttaattct ttgccagggc atccagcatg 16020
tagaagagat gtggtgagga ctttctcagg tggagctgtc ctgataggca tgaggagtca 16080
gaaggcttca gtatgcttgg ggtcatcgac acttcagagg ttccccctca gattgggatg 16140
tccctgctgg ggatgtcagg aaggacactc ccaaagttcc accagagaag agagatgctg 16200
gtctaaaaag gcaaaaatta cctcctccca gagctactcc tcttacctct ggaatggggc 16260
agaaacaagt tggataggaa tggcaacctc tagtctttgc aggatcctga gaggactcca 16320
cccctacccc cacctccgtt ttgctcagaa tggaaatggc ggctaccaga taaagacttt 16380
ctattggtct ttggggcttt ttaagaagag aacttaaata caacccaggt tactcaaaca 16440
gaagttgctg accttcccag ggtacagtgg aggggaggaa gggctctcat gctgaccaga 16500
agagacaaga acttctgtga cttaaacagg gcatggctag aaccctcatt tcctcagaga 16560
tgagattatt ttgtcttatg accttgacag atggaatgga atttggccct tctgggactt 16620
tgccttttgg gtaattgtac tcagttaggc aaccctggga ctctctttat tcataggaca 16680
tactgcatat tcttgccctg cccccatgtc acactcacgt caattgaatg taagccagac 16740
agctacataa gaagcatgga atgctttgac gttggtaaaa cctgcattgg agaaagagaa 16800
cccttgcagc tgatccttag atttcaacca tgactgcttc ttgggactgg cccagttgat 16860
ttcagtttgt attcttcagt gcgctcggga ctctgtttcc taggccaaag ctcttctgtt 16920
ctgttcattc tacactgagc tcctgcaaat gttcccttgt ccctcaagaa cctgcgggta 16980
tcacagacca atggcagaaa tgtctggggg acaacataca ggtgttttat tttaccacac 17040
aaggatatat taaaaaaaaa agttagggta gtggtggccc acgcctttaa ttccagcact 17100
tgggaggcag aggcaggtgg atttctcagt ttgaggccag cctggtctac agagtgagtt 17160
ccaggacagc ccaggttata aagagaaacc ttgtctcaga aaaaaaaaaa ttactaagct 17220
agggctatat agcttagctg ttaagtgctt acccaacaac atgagacctt gggttcaatt 17280
tgctgcacaa cataaactgt gtagtggcca cacacctgaa atcccagcac tcatgaagta 17340
gaatcaggag aatcagaagt tcaaagccag tttcaaatac agagaatctg agtccagctt 17400
ggagtgcata aaaccctgtc tgggaaagaa aaaaaaaaaa aaaaaaaagc agtgttcccg 17460
tacacatgaa gcattctatc cccaagacaa aggaaataca cgatgtgaca atatgaagta 17520
ggtttctaat acatttttag ttatttgggg agtgtgaaga tatgcatcac agcacacaaa 17580
tgacgatcat aggacagctt acagcagtca gctttcttct tataccacat gggtccgaag 17640
atggaactcc agttgtcaga cttggccgca ggcgagttta tccactgagc ctctctccgg 17700
ccatgaagca gttactttac gttgactcgc ttgagcttgt tgggagcatg cttaattatt 17760
gctttgctca ctttggttgc ctcagagtag cttgcgagaa ttactagact cacacgttag 17820
acccagatgt cttctgcctt ctgatgagga gcaagcgtgt gagtaaggag gggaagcagg 17880
tcacagtcca agccgctcaa gtctgagctg caaatccttc attgtacaga cggctccgaa 17940
tcagaacact tcctgttgct acagtcagga cggttatagt ttttattgtt ataaatgaca 18000
ttgtaattaa taccccttaca cagaaagtgt aaaagtcact tagaaataca aacatcataa 18060
actactaggt tgaagaaaat tgacttttc tgtgtcaatt cttaagatta actttgatta 18120
ttttattgta aaatgaatat atgttcatac tgtaaacata tttaaataaa caaggaaaaa 18180
gtagccattg gctatgcctc acctagtaat aatacttaat actgttcact tcagagcttt 18240
tggctttctg ggtgttttcc agaaggttgg actaattgag gtttacccca tcagagaaca 18300
gtgctatgct gttactcttc tcagcaaatt cagtttgtgg ctttgcttta atctttgtta 18360
gtgtaagtaa cttggaagtg gtgttccatt gtttgagttg ccttttttcc tcctgtgtct 18420
ctatcaactc tcaggcctgt ctttgccagg tctgtggaaa gcagatgcta catcccatcc 18480
ctaggactgc caacagcatc agcacaggcc cctgctctga tcaaatacaa ccacctttt 18540
ccctatgaag atagaattat atacaataaa gtccaccatc tttagtgtat aggtccacaa 18600
gctccacaca taatcatatg tctaccatgg tcaaaatata gaatagttgc ctcacccaat 18660
aagctccaca tgtgcccttc ggtaggcaga ctgtctcact tatcctcagt ccctagtaag 18720
ccacacatga gcacatgcat acagggtaca aaggtcaatt taaggtacca ttcttcaggt 18780

gccctctacc ttgtttgttg aaaccggatc ttttactgag acccagagtc accaattggc 18840
tcgcctatct aacagtaagc tccaagtatc gtcctgtctc ctcctcccca gcactgggat 18900
tacaagcatg tgccaccatg cctggctttt aatgtgggtt ctggagacca aacttagatc 18960
ctcatgcttg catggaaaca tgttccaact gagctatctc cctattctaa tttttgccca 19020
tttcttaggt gggtcttttg gtttcctagt actaagtttt gaggattctt ttgctatttt 19080
aaatagaacc tctaccaagt tgtgtgatac tacaagccat ccagctcatt ctttcatccc 19140
ttgtcttatt ctttctggct cttctttatt ccctttcttt tgaaaagaag tttttaattt 19200
tgaagcagtc cagtttacca attgtgtcct tatgttatca aatctaagat ttttgttttg 19260
ttcgttttga tggtattatt atttattatt attattattt aatgtatgtg agtgctctat 19320
ctgcatgtat acctgcatgc cagaagaagg catcagaact catcatagat ggttgtaagc 19380
caccacgtga ttgctgggaa ttgaatgagg gaccactaga agagcagaca gtgctcttaa 19440
ctgctgagcc atctctctag tcctattcat tttttttaa acagtcttgc tatgtagctc 19500
agactggccc caaactcaag atcctcctga ctcagcttcc caagtgctga gattacaggc 19560
ttgttcctct aactcctggc atgagaaatc tttaactgac ctagaatcac agattttctt 19620
ctagaagtct tatagcttca gaatttattt ctactttctc tcttccttta taaacacatt 19680
cctaggccca gacatttctt ttggaaaaaa gttccaataa cagaactgga cacacctgag 19740
cagatgtagg gtagagtcag acctgggagt cttgccaggc acagtaccct cctggagcca 19800
tctgcaaaga agttacctca ggagtggctt gtaagcagat cttctctggt tttaaagact 19860
tggcataaaa ctgaaaagtg tatcttttga atcagggagc agaacgataa gagagaaatc 19920
tctcagctct ctagacaaat cctcttgact atcacagagc tgatggtgag cggagccaag 19980
caagactttg tcgattacat gcaaacgccc aagtcagtga ctcactcaat catgctttaa 20040
tctcataact cagtggcttt aaaaattaca gtcaacaagg cagctcgtgg gttacaactg 20100
ccattggaac taggttttct ctgaacagct ggagtgtaat gtggtgggaa gaaagcctgc 20160
tgtgggtgag aggccaaaga ctgtttgcct gggaaggatg tgcaactaac gtttgataaa 20220
aatctgtgaa atgaccaccc tcagccaatc taagtagagg cctgccattt tcatccatgg 20280
gaaagtgcat cacagcaaaa gcattcagaa ggcactggta agacagtggc agtcaccatt 20340
catcagacaa gacagccctg acttcaggaa gtgtcaggag tcagagtatg agtatggaat 20400
attaacagag caggcagaag attccaattc tagtcaagga gggccagtga gagagaacag 20460
tttgggaatg gcttctctga acagatccag gcagatcagt gcagtcattt gctatgttct 20520
aaaatgtgta ggcctctgcc atagctgtgt cacggaggat atataaacag gctgttcttt 20580
gaggacctca ttgggctgtc cccaggcaca aacattttct taatttcaat gtagaagctg 20640
ttacccacag gagagatgga gtaggacttt ggtttcagag ccctatctat agcagctttg 20700
ttgagaccta actggaaagg ctcaagatag gacatcacac aaggcattta gaagcttgta 20760
gcagtcatca gacatcagac cagacctgac aggaagaaac aggtgagtct caagagggtt 20820
catcaggatg ctcacgagtt tctgcctgca cagcatgggc atatggtatt accaggagaa 20880
gccatctatc tgcccatagg ggacaagcag acatcagttg ggtgataggg acatgaaaac 20940
tttctggccc atctttatat ctgttccagt gaaagatgtg tgaggtcctc acccctgaag 21000
gctctatact tccctctcct gctagacagt ctagcgagac taggaagcaa cacagaatct 21060
agatgaggcc tctgtgagct gcccaggtcc ttaggagtgg agtggggcag gacccgttac 21120
aagagtacac cccccgcccc cgcaatgagc ccagttgttc actatggggc cgggaacatc 21180
acccagcagg ccctattggt cctggcctgc tcccctccct ccttacctcc tcactcactc 21240
ttcccagctc gatctttctc gcttgttaga gagagaaaaa aagtgaattc actcccagtc 21300
cttttgaaac ccaatgtgtc agtgatcgat gaggctgtat tctctaactt caaaggagaa 21360
aaactaagta gagtgaatac tggccagggg agttgaaaag tcccagggag taggagacac 21420
aggagtgacc ctgccatcat gaggagcacc ccccatccca cccctgctgg tgccatgcag 21480
aagcacagac aatgccactt tcagtaaatc atgacggatc ctgaatgccc agttttgtcc 21540
tgttttcaat gggctgtggg catattgctt aagatatagc aagccatttg tgctgggttc 21600
ccagctactc aaaggctcga catttgagtg ttctctcaat tgtataatag agcctttgca 21660
tatgtgattt gggggggaggg ttttttcctc cagatttcca tagctaatca tagtagaggt 21720
gacctcaagt gtagtgcaga ccattgtccc tcttcacccc tgcagatctt agcagtgctg 21780
agctttaggg atattcaggc agcacctaat tcaatcacac atctgacccc tgcctctttg 21840
gccactcctc tgaaactcag ttagctccct ggggtctccc accccacaag cctggatcct 21900
caagagcctt tgtactgagt agaaagtgct cagaccttcc tccaccctat ccagattccc 21960
actccccccg cctgaattta agcacagaga atccagtgct gcagggccac ttgttctcac 22020
aaggctgcac ttgtggagat gcctgtgtga agcaccctgt agacatccca tgctaaagtc 22080
ttgggaacac agagaaagaa aaccctgggg tcatttaagg gctggtgtgg tcatttactt 22140
aatcatctgt gaccagcaag ggccttgttt tcagtaaagc tcggaagctt ccttggctct 22200
ttatcaatca taacaaacag ctagaattta ttgagagcct tctctttgcc aagtgcttct 22260
acttgctaac tttaacttcc tccaccctca agccctctac ccatttttac agatgaggaa 22320
actgatgctc aaggttgagg agttgtcaaa gagtacacac tggccaggat tacggaacca 22380
tcttctgcca ctactgcctt tctcttgttg gatatggacg ctgtggtttt atactctaca 22440
cagtttaaaa atggtcgaag ttctcaattt agggcaactt tgaaaggcta aagtgctgtg 22500
tgagtatagt ttttataatg acaaaattcc agaagaggag actaagtgaa tagttgctgg 22560

atgtcagagc taatgttgct aggagggagg cccatgtcct gggaccgtct ggtctgtctc 22620
aggggcagtg gcaactgtga ggatccaacc atgtgtgcag agtggcccca atatggacac 22680
attgtgacaa tttcctgagc tataaccatg taagatgtaa cctttggtgg taattgagtg 22740
atagggacat gaaaactttc tggcttatta ttgttgtttg tttgtttcta ttaattctct 22800
taagtacctc agaaaaaaag tgctacttaa ttccattgtg tcaagatgac ccagtctcag 22860
atcaagagcc acattctgcc caagcagttc acaccatgca atttcaggac ctaggaggga 22920
acagtgtcta gcagagagac cagattttaa tgccagtcag atgtaagctg agactctctt 22980
tccctttta tggaagtgtt aaactaaggg ttggatgttt ataccccaat ctcagggctg 23040
tagttaggga cccagagcaa gtttctcaaa ttctgtaacc ttttcagttc ctagctgtca 23100
ggtagctatg tgaactgtac ccatctctag aagccagtaa gagaatccag tagaacctga 23160
tggcctaaaa ttgatgtcca ggtcttacag agtaaagaga gagagctgac ttcagcaaat 23220
tgtcctctga tatctacaca tgtgtgtacc tgaaaacaca catcccacta ataaaatata 23280
ttaatgtaaa caaaaaaatt aaaacttttt taataaaaga agaggatcta gcgagaacac 23340
atcctgccaa aaaacaaaaa aaatttttt ttaagttaca ggtagtggtg aactgcctaa 23400
aatgagtgct gagaactaaa cttgggtcct ctggacaaac agcaaattct cttaacccct 23460
gagccatctc tccagtccta gccttaccac actcgtcaca gaaagatatg ttgagctcac 23520
tctagacgac ttattgctag catgagtatc tgtctagtcc catgtctaat cttcatgatg 23580
taatcagacc tacccagcag atagcaaggc agcagtaaat gctctttttt atttttctg 23640
gacttggtca tttatttctt cactgttatt actttactga agatttgggc tggcactggt 23700
gataaactga taggtatacc caggtggtct ctgcctgtat ttgtttctcc tctattgcta 23760
tgacaaaacg ccatgaccaa gacaacttaa aaaaaaagaa agcatttaat tgggcttatg 23820
gtttcagggg gctccagtcc ctgacgatgg agcaaaggca tagcatcagc aacaagtaag 23880
aattcacatc ttgatccata agcacaaggc agagagcaca ctgggaatag caccagtctt 23940
ttgaaacttc aaaacctgcc tccagtgaca tacccccttcc aacaggccac accccaatcc 24000
ttcccaagcc atttcaccaa ccattcaaaa tatattcaca atatatgagc ctcatggtgt 24060
tctcattacc tgagaccact aaagggcttc gtatttccta tcacatggaa tcctcccatc 24120
atgtctttta taacttagag taggcctatt ccatgtagac tcctctacca gatccatctc 24180
ggagctccag caatgcagtc atgtgactga gcgtctctgc cagcctttgc tctgaactgc 24240
acattctgcc tccacagtga ccagagctgc agacaatgta tacttaggtc catgccctaa 24300
acaatagatc ctagacacag aagtcctcag cccatttctt cagagaagag cagtagctcc 24360
tatgttaatc ttagtagcag tggtggttgt tgtttttttct tggttcctgt cagtcagtat 24420
tttgaccagc tgactaacat ttcttatttc agccttttgc atcctctgag agtaagatcc 24480
tcttggcttc agttctggtc tctttactga ttttgagtac aactgagcca tgttagctgg 24540
aaggcagaca ttgaatggaa aagtagagct agcatgcctg tctctctcac tcattgtacc 24600
cacctctgac agggtatgta agggtacccg tccctcaacc cagcctcagt cagcccatga 24660
ctctggatgg gccagtgtgg ttagccattc atgggggttg catgtcttaa ataaaagggc 24720
atggaaggaa gcctctttgc ctatgatcct caacaaggtt cacatctgaa tgccatttgc 24780
tgttctctgt ctgcttgaac ctagagaagg agaggttgta gcatggggct cttacatggg 24840
agatagcaag tgggaaatgc agactttaga gccaggcagg tttgcatcta tatgccagtt 24900
gaccaagtgc tgatttgcct tattttagcc aaattactat acctacccta gcatccatcc 24960
tgaactcctt taaatagtgg caatggtaac tgggcgtgtg accctcttgg caacattcca 25020
gctgcacaag gagcctgtga ctcctgcttc tccttttagg gctttatctg atcttgtcct 25080
ttgtgtgtgt gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt gtgtgtgtaa tctttgtggg 25140
gcttacccaa agttgggtaa gtccaaagtt gggacttctg tattagaact aggatggttg 25200
ggacaagata atagctgagc agatacacag tggatatagt gaacagaact gtatacttgc 25260
atttggactg cctaagccag tctagcaggt tgttgtggct gcttccctgc ccaatcacca 25320
atagacaagt ctactggagc caaggtctga ctgggcttct acctggcaag acacatctgc 25380
caacccagca tggccgtctt aggttgtttg tttggggatt tgaggaaggg gtgagagttt 25440
atttggctat ttgcttattt ggttaattta ttagtattct tgtttggttg attgttgttg 25500
ttgttgtttt tgaaacaagg ttttactgtg tagcccaggc tggcctcaaa ctctcctgct 25560
tcagtctcca gagtgccaga gttagatgca tgtaatccca tcactagtgg aagccttact 25620
tttgaagagt gtagctcagt tagaggtatg taatgccata ggctgaagca gccctagaga 25680
ccagtcacca agggagaagg ttggggctac catgtgacag aggagctgtg tcagcctggc 25740
cacctgtgca gtggtgtaag tactacaaga ctccactgaa atctgaggcc caggtctgct 25800
gttatgtttc ccagggaggc atgcagagaa aaagtggttt ccctaatact gctcaagttt 25860
aaaacaaaca aacaaacaaa caaaaaacat ggtggtactt gcctttcata ccagtactca 25920
gacagcagag gtaggtgaat ctctgtaagt tcaaagctag cactatgttc aaggcctgcc 25980
agggctgcat agtgagaccc tgtctaaaaa agaaaaatga aactgaaccc tgaagttgta 26040
gaaactgctc agatttcagt gagttctttt ggactaactg aatgagcttg ttccagcgcc 26100
ttatttttc tcatgtggag ctggcacatg agcaagacta tccccaggct ttgccactac 26160
aggatcacca ttgtggatag gtcatactgt tggtctgtga ttttcctcac ttaattttca 26220
caacaatctc agaagtgctg tcattatctc ctataattct tcagagtcag aaaatgaggt 26280
acaaagaggt aaaagaagga agatcaccta actattagga agtaaaactg ggatccaaag 26340

atgggtgacc ttttcttcta gtgtaatttg ccttctgacg ttgtaaggcc agggcacagc 26400
aaaggagaca gaagcagaag tgtgagccct tagaatgcta aaaagaaaaa gaaagttaga 26460
gtggggaaag atctagacta gaacagttag acttggtctg tcttctgaat tctagctttg 26520
gagcccccgc aaagactgca tgttatatac agcatagagt taaaaggagc acaggtttct 26580
gcttaagaaa gaatgtgagc ttacttcatt aacattcaat agtatatata gcttcttttt 26640
atatttcaca cttatttatc ttgtgtgcat gtatatgtga gtatatacac atgccaactg 26700
cacacatgtg gagatcaaag agcagtttat ggaaatcagt tctctcctcc taccatgtaa 26760
gaccctggga tcaaagtcag atcatcaggc atcagcagga gccttctcgc tggtctccat 26820
atgcagtttc ctaaagaaca aggttatcca agggctctct caccacaggt gatcacagtt 26880
acatcacagt tagcaaggcc agaagaatgc aaagaatgtc tttatttcct tcctggagcc 26940
tggctcctgc cctcctaaac ttcttaaatt ttgtttaata tttacatctc ttctaagatg 27000
taagtacttg tgatgtcttt aaatttcaca acacccatgt gttccctggt ttacactaca 27060
agtagggcag catctcttaa ataatgttgt tctagaagga agagagctca gatacaagta 27120
gcaacctgga taggaatagc aattccagct attggatact cactggatat agttctaaac 27180
agtctaatca gcagttgtgt gatcagtggg cacttagggc tgaatggtag aagagtagct 27240
ctcatgccag gaaatgcacc aaactcacca gagcaagcac agacaatgga ggagagacag 27300
gtggcttgcc ccaagacccc ccaggagcct aagatggcaa tattgtcgtt ttgaatacat 27360
tgtgcaggca cttggcctct gggagggagg aaaacaatta gcttagcatc aaatcatgaa 27420
ctctgacaac tgctctatct tatataagat ctccttacat aaggatgcag agagagcatc 27480
ctcattaaaa cacctcaagg ggttcatact gattttctag aagcagagct tctctcccaa 27540
caaatacatc aggactggct atagacactt ttttcttcaa taggctaaaa agatcccaca 27600
ttcctccagg agacaaacct cagaacagcc acagaggaac tgggctccat ggtataggtg 27660
gggcatctaa ggtcccagag cccacctcca tccagactca gggagagaac aggcaagcca 27720
aatctgctgg ctctcaattt ggtttacata actcctgact cctcaagtcc ctggaaactg 27780
aggccaattc cctggaagat cattctgttc tctcctgttt tttcaagaag agagccagcc 27840
tgatcactgg ctccgaagac tgtgtgagag tgtcccactt ccttcttcca cgaactgagt 27900
gtctgccgtc atggctgttg tttaggaagg ttctgtttga actctcataa ctccatatat 27960
gttgaccttg tattataaag aactttactt atcttatgtg taccctcctc tgtttccaaa 28020
agaaaatgga ggacttgcag caaaggaaat aagtaaggtg aatacattag gagaagtgag 28080
agactgggaa gggaggcaga cagaaggtga gctcccagta tctgtgtgca gagtaggcac 28140
cagactctct actgcagtat cgcaacagca gaagcaatcc tacctcagag agttgagggg 28200
gaaggtaaga aggcacattt ttttttaaaa taacaaactt gactgaaagt tgaaagatgt 28260
gttcctagta ctaagaacag tttctcatgt gaggttgcct ttaggggcac tgcatacact 28320
tgtagcaatg aaaaaagatg tttataggct ctgtcttaag gtaaacttgg tgagaatgga 28380
gggtaactaa aacaacttaa ggaaggccat gagtctgggg agcactagct cttttggagc 28440
ctcagtgtgt cctgggtaaa gttggagcat ccttgtggtg gcagctcgat tggtgcacta 28500
agtgcaaatg tgcaccaagt tctggactca ctcttctcgg acacatagac tgagtgtggc 28560
tcatatctgt aatcacagca ctcaagaggt ggaagtagaa ggatcagaag cacaagatgg 28620
aacaacctca gctctataga cagtttaagg ctatcctggg ctacctgaga ccctgtctat 28680
aagcaaatga ctaaacaaac agacaacaca cttaattttt ttatagcaac cactttgaag 28740
tgggaggggt ctgatagggt ctctattgtt cacagcaagt gcacaaggtc aagagtagct 28800
aggcagatga agaagaggcc aagacacctg aacagtatct ttcccatggg ttcggaggag 28860
ccacgtgcca ccttcacagt cagcattgtc tgtgcgagta gctctggcag catcagtgcc 28920
caaacaacgg ctgatacgag tccccagatg caagaggaaa tagttgtctg taattgcctg 28980
ttttaagtag agtggtcagg aggctacagc ctcctcatcg ggctacatgt ggcatatgca 29040
ggcttgctca tcagaccttg tatttactgt tttcacctta atggagaatg ggagaggcaa 29100
acaaagccca gggactttgt ggaagctgac tagaagcctc tgggactcca gggactgcca 29160
atctgctaaa gaagaagcta agaaagaaaa tgagctcctc tgcatgggtc tccccatgat 29220
ggaaacagaa ggccacatgg cacagtgtaa atagagccct gctgcactgc tcttactgtg 29280
gtgaatgaag aagaggcaac tagccaggag ggcaggacca ctactactgt tttgctggct 29340
ggttcctccc aagtgagcag ccttccctgg ggacagacct tagctctaag acagacgtgg 29400
cttcttcgga gcaagtcaaa cctcaacatc gaagaatcct tgtcttgtca gttttagctt 29460
taacaagaat agaacaagct tctggaacag gacacagtgg agtcaggaga agcggcctta 29520
agtgaagaca cagctgtggg gtttccagac tcgcactgca gggaggcgtc atccagtggg 29580
agcggccagc ctcgctgtag acttccaaca ctaacgaatc gggaactcca tgctgaacag 29640
gatttagtta gagggtccct gtgccagcag atggatgtat ttttcttgaa agaccaaggt 29700
gccagaactc ttcatgatta cgttactgga gcaaggtcct tttttgtggt ttgtgaagtt 29760
gagcgtcagg actgcaggat tctcttgctc tttcttactc ttatttttttc caggtcagaa 29820
ccagagcttg gagcagggag gaaaatcctg ctgaatgagc aagttctttc ttaaaaagct 29880
cttcaagtcc aaaaagactt cagtggactt aggagaaaga aatttaatac attgccatag 29940
aatcgttgtt aaccaagtta aagcaaagcc cacagcatct ttgtcttata aaagaaagca 30000
aagaggagat ggaaaaaaag aaataatgct taggaaatcc aaaccaaaca atgaagacta 30060
acgaaggaaa actaaagatc acttcaaaga atgtgaagat tccctcctaa taagattttt 30120

caattttcaa acctaagctt caggtgggag gacctttca gttttttttt ttttcaagta 30180
tgctgttaag tggcattccc caaaatgttg gccctgtgta ggattggctg ccttccacat 30240
aaggagcagt cagataccct gcaagaccca ggaactgagg gagctttaac catgggaagc 30300
tgagaggctt gccagactgc tccttgacct gagcttgaac ctgagtccta actgctagca 30360
aactgaaaca agcccagcct ccaggagaag aaagtgggcg gaactagagc agtcctagcc 30420
agaaaactat gctcctttca ccactggctc tgtctttaca tccctgggag ggaagcctgg 30480
gttgggcttc aagatcgcct gctcagacca tccctctcac ttgctagccc cttccaggcc 30540
cacgcagagg cactagtgcc tatgagaggt cagtttgcat ctgttgtgga caagacaggg 30600
aattccttga catttttaat atttatttat ctttgttagt gtgtatgtat acacacacac 30660
acacacacac acacacatat atgcacaaat gtaccaacaa aaagttatgg agcttgtggg 30720
gggagtcagt ttttttcctt tcaccatgag gattcccaga attgaactca ggtcatcaga 30780
ctagaagcaa gcatcctcac caactcagcc ttctcactat accttgcata gagtttctca 30840
acttttgcct aagctcagac tggtagtttt ttgtttttgt ttttaaagat ttatttattt 30900
attatatgta agcacaccag acacaccaga agagggcatc ttatgtcatt acagatggtt 30960
gtgagccacc atgtggttgc tgggatttga actcaggtcc tttggaagtg ctcttaacca 31020
ctgagccatc tctccagccc cagactggta gtttttaaaa gcaccagaag ttctgagctt 31080
ccatcttcct tactcagtga gtttaagaag cacctgccta ggcatgatat tctccagggc 31140
aggccatttg ggcaggccat tctgtacatc tgagcctgtg aaagactggc ttgttcattg 31200
accccaagag acacctggct gcacactgac caccctttcc tgtttcattc tgtcaccttc 31260
tgttgcttat tcttatgaac gcatttgaat ccactgactt cactgggctg ggatccaaag 31320
taaggccacg tgccttttac tcatcataga aaacaactat aggcctccta gcctcctgct 31380
tagccttgga cattcattct ctccctagtt ttgctcacaa catggtagaa tctgagaccc 31440
aaaaggacgc cctttatttc ctcagccaac tagtagtgtg gttcctggga ggagacactg 31500
ctggtctccc ttgccactat agtaaaaccc aagaggtgca acaacccccg aagagcttgc 31560
ttcctacctt ccccaaatcc gtgggaaagt ttgccatcct gtcccaaggg tttcagcctt 31620
tatttaactc agccttagtc ctatggccag atgccttgtt caccctatc atggagcctg 31680
gacagtgaag ggccccatca gaagttttat gttctgctgc ccacagctgc tctcctgtgt 31740
ggtctcagcc taagtttcta gaaataaaaa gctctctcac tctcacacat gttcattctc 31800
tctctctctc tctctctctc tctctctctc tctctctctc tctctctctc tctctctcct 31860
tccttccttc cttccttcct ttcttccttc ctctcctccc ttccaactcc ttcctccttt 31920
cctttctttt atttcttttt gtgaagcaga gtctctttat gtagaccagg ctggcctcgg 31980
attcataaga gatctgcctg tctttgcttc ccgagtgctg gaattaaagg tgtgtacaac 32040
cacactcaga actcttccat ttctacctaa agaagacctg tttgtccttt gtcaagctga 32100
gagcctttcg tctccctagg tccctttcaa aactttattc ctgtggcaat ggcctagaag 32160
ccaatccctt tgagaggacc cactagcagt cagtgcttct gttccatgta gcagctgcca 32220
ccagagtggc ttccattcct gctggctgac ttcccactga gggggggcta cagagcttcg 32280
tatgtgcccc aggctggcag agagggcagc aaggaaggct ctgttctggc aaggcttatg 32340
gtataggaag tatctaggaa atactgttgc tcttcagggt gctgacaaga taggagctct 32400
ttcttgcttc ccggggattt ggacccctag tttcagtaga gctggtcttt gttgactgtc 32460
tctgcctgga tgtcctctgc tgtaggtctt ttgttctgct tctcttggga attcttctgc 32520
ttgctttctg gctggaggta ctggtacagc tgcactagcc tctatactca ttgtacacac 32580
tcccctagct tgtgggcctc agttgagtca cacatccctt catgagctgg acactgccag 32640
catggatatc tgttcagcaa ctaaaaggat aggcctccct tagcactgtc aggtccaatc 32700
tttctctaga gattgggtct gcttttccct gcagcccctg gatggcacat cattagaaag 32760
aaggacatgc cttccagtgc tgcctctgtt tctgcttaca gggataagta tgtttattca 32820
ttcatactga actttgtact tgtaggcacc tccatgcctg tagacatgcc tgatggcttg 32880
acttctctga gaaacacatc actgtcctag gtagatttta gaacttaaga gaatggtacc 32940
caccttgtcc catccctacc tctccactcc ttggcttttc tttgaatatt ttaattacct 33000
gtccatccta aggtcacaca cagtctaatg tctggacaca gttcctccca cctctctaga 33060
gtccataaat acctaggaag ccagtacagc tttacaaaga agactgcttc ttctgactgg 33120
cccttatggg cctaatacat accaaatctc tcaaacacag tgtagtgtga gaatctaata 33180
agatcatatg aagaatgttt agagcagatg tacttcataa atattagttt cctacagaac 33240
gtctgtcact cagaccctct gctttctctc agttgggctg catttctctc tcatgtctgt 33300
cagtacttag ttccctggcc cgtctgtatc catctgttgt catatcgtat tgccctccct 33360
tgcccattat tcatccctca aacctttctg gaaagatcca gctttggacc agcttggctt 33420
tcttcttcat actactgtca aggctgcaga gggttgttca ctaatcctag ctactgagtg 33480
ctctttggtg gtcctcctgc gtggccccat ctaggtcttc gtcttgtcct ccaaagattt 33540
gactgcaacc ttcatccttt cctcaaattt ctaatctctc aaactctcca ttctttgcag 33600
ataatttgac tttctagttc tcaggaggac agaagccatg ctagaaagtt ctaaaccctc 33660
cttacctggc ctacagacct ggctctgtcc ctgctcaccc ctcccatctc tagagaaggt 33720
cttccattgt gtgttggatt ccagtccctg gccatctcag aagcaacact gtttactcca 33780
tctcttgggc tccctctcct actatagtca attctgcttt aaaatgtcac tacttatatg 33840
tacacctttc actcccttac tcactgtgct gtcccactgt agtctctgct gtctcctccc 33900

tacagccatc taaagccact ttgacctctg tttccttgct tctcactttc caatctgtct 33960
cctacccacc tcagctccca ctactacttc cctccagccc tttctgccag atccagtggg 34020
gtccctgttt gggacacaca ctcctctcct atgtggcatt ttaggagggt ataacaaact 34080
gacttggctc ttccttcctt aagaattccc ccttagcttc ttcaagacat aaatcaagac 34140
ccacagccac ccttcttggt ctctgctccc agatctctca tggaggtgtt ctttggactc 34200
cactaggatc ttcttcctcc catgcactct ctcaagacga tctcacccac tgcagctagc 34260
tctcatcttg ccagttgaag cctgcacatt cacttggacc acacatacag cagccttctg 34320
gccatcccca ccaaaaacaa agaaaccaac agctccaaat aggacccaaa ctcaccgccc 34380
aagcttacca tcccgcatca cctgcaggag tggcctcacc atctgtccca ccatctgaag 34440
cagagaaact gtgacacctc cattcccctg catatccaga ccagcaaagt tccataatgt 34500
tcttagcaat ggacaaagag agtgagtttg agttaaaact ctagttctat tgtgctgtgg 34560
acaaattcct taaggatttg tttgtatgag tttgtttgtg tgtgtgtgtg tgtgtgtaca 34620
catgtgtgtt tgtgtatatg tgggtatatg tgtacgtata gagatgttct tgtatgtgga 34680
agccaaacaa cctcaggggt agttcctcag gtgttgtcca ctgcttctcg ttgttattgt 34740
ctctcactgt tctgggttta agaaagctag actggctggc tactgagtcc caggatctgc 34800
ttatctctgc ctccccaaca ctattacagg catgctcaca gatgcacatc atacctagct 34860
tttaaaaaca tgaatttggg gaatcaaatt caggtctttt tgcttgaatg gcaagtactt 34920
taccgactaa gctatctcct taacctctct caactgagct atctccaaag gcatacagac 34980
acacacacac ctctcaacag gatctcaata tgtagcctag gttgtcctaa aaactctaac 35040
ccttctgtct cagaatcttg agtacaaaaa ctgtgggtgt tcattactga actcagttaa 35100
attcttaatc tttatcagcc ccaagctctg catccattaa atggaaatta taacacctaa 35160
ttcaagtggt catcaggata aaggaaagcc ttcttcactt ggtgtgtgtt tgataataaa 35220
agtatttaaa taaataaata ttcaataact gagtgcccct ctgtcctctc ctccaccaat 35280
cggacttgtc ttgttgttaa attgctgttt ctatagtttt ctgaccttga agccctcccc 35340
ctcaagatca cacttaccag tgttttcctg actgaggacc acagtgcctg tttcatccct 35400
ccttttttta cttttggggc taggaggcag attctagagt ccccattaca gggtttgatg 35460
tgtcttctct ctaagctgtc tctagatgcc cccatctcca caaccctgcc tgagacccag 35520
gcctaatctt tttagtctgc catgatggcc ttgcccaaag cccttctcct gcaggcttgc 35580
cttcagttta gcccatctct cgctgaccac caggtgtctt gtcctctgac acctgctgtg 35640
ctttcctttt cttttctttt cttttctttt ctttttttct cttctcttct cttctctttt 35700
cttctttctt tctttctttc ttttttcttt ctttctttct ttctttcttt ctttttcttt 35760
cttttttacca tgtgaattcc tcatactctt acatgcagct tgctgcatta gctcagccct 35820
cctgcctccc tgaagcagcc tgatatcgtc ctccttgatc tcattcctcc ccccccccat 35880
gttcctctcc ccccccccca tccacgatac agaggaggaa agcatttggg agtggttgag 35940
aaactgaatc tcggtacagc gaccagtagg atagactgag acattcagca aagaccaact 36000
ctactgaacc caggagccaa aaactctgca aaacaagaaa aatgtaacac aagagtgggg 36060
gcatgctagt ctttactcaa aatcaaagta gagctacctt gtctcgaaga atctagaaaa 36120
tgccaataaa gtggagaatc ctcccactgg gctgtttctc tctctctctc tctctctctc 36180
tctctctctc tctctctctc tctctctctc tctcacacac acacacacac acacacacac 36240
acacacacac acacacacac acacacacac acacacacac acgtctctcc caacctttt 36300
gttttggttt ggtttggttt ggtttttgtt tttcgagaca gggtttctat gtatagccct 36360
gactgtcctg gaactcactt tgtagaccag gctggccttg aactcagaaa tccgcctgcc 36420
tctgcctcct gagtgctggg attaaaggca tgcgccacca ccacccgctc tctcccaacc 36480
ttttgttgat ctatttttt gtggtttcct tagcatgcga tcaaatgtat gagctgcttt 36540
atctgcccac cccaccatgg ctacctgctc tcccacatgg actgcagtgg gacctgtcat 36600
gcttcctgac ttttgctacc aatgctggtc ttattaccaa tgcagtagtg atactgaggc 36660
aaactgtttg gcagtgaaac ctttctctaa gccacaaatc catagcttaa aatattgagg 36720
cagaagatgc aaaatttttct aagagtgtag gtttttctgt ttgttcattt gtttttagtg 36780
gacaaaatca atacactgcc tcagctagaa agaaagaagt gaggcaaaag gtcatagttg 36840
tgattaaatg ttgttgtaat tgatctgcta tacagtgggt ttttttttt gttttgtttt 36900
gttttttttt ttttttttt tgctttgttt ggggatgttt ccttttgaca cagaatctca 36960
ggaggtagcc caggatggcc ctgaacttta aaccttctgc ctcagcatcc taaatgctag 37020
aaccaaacac atgtacaacc acacctatct acttatgtac taattatacc aaataatgga 37080
tttgcgttgc cctttctata cacgtgtact tatacttcga tggtcatgcc catcactgtg 37140
tcttgttccc actcccctgg cccttccaaa atagttcctc tcctctcctc tctcttttc 37200
atctagattc catgcatgag acagaatata tttgtcagtc taggtccaac ttatttcaca 37260
taacaaatgt caaattttca aatgacaatt ttttaattct tgtttcttat ttcattttcc 37320
tgtgcttata catgtgtggt gcatgtttgg tgggtgtgtg catgcagagg cttggcagtc 37380
accctcagct gcttttccac gtttctctct gaggcacagt ctcccatcac gtccagggct 37440
cactagtatg gcgagtcttt caagccggct tgcactagag atcccctctt tcctctctgg 37500
gataggaatt ctcggcatgt gtgtgagttc tggggagcca cctctggtcc tcatacttat 37560
gcaaaaagtg ttttaaccac ttggcattct ccccagctct cattcctttt tattgctgaa 37620
taaaactcca ctgtgcgtat gtaccacatt ttctgtatcc cttcttccct tgatgggatc 37680

tagactggtt ctgtagaagt gccatgaaaa ctgctttggt acagatcgat gtctgtgttg 37740
tgctgacttt gtactccctt cagacagatg tccagaggtg gtagaactgg atcataggat 37800
agtgctattt tctctctctc tctctctctc tctctctctc tctctctctc tctctctctc 37860
tctctctccc tccctccctc cctccctccc tccctccctc cctctctttc tttcttcttt 37920
ttggagaagc ctccacactg atttccatag tagctgaact aaattctttt taatttaact 37980
gaaatagagg cctgcttaga gccaaggtat aatctgtaag aaaagccttt gactccagtg 38040
aagttcctgg ctttgttgtg gtaaagaagc atttgtttct agtttgagtg ttcatctggg 38100
tcagtaagag gacagaccat tcccaagagt gtgctttgct ctgagggaga gaaaaattgt 38160
ccagtatcta atggtgcaaa tcattagttg tgttaataac cctacagggg aaaaaatcat 38220
aataacgtat ccccctttca tgtacttaat gtagctaaat tttccctaat gagttaaaag 38280
tccatggaat ttttggagat agtaattggc tccacattgg aaatgctcaa gctccctgag 38340
ccctgggctc cagtaagaca ggtagtaaac ctgcctgagc cctatgaagc cctgtgttca 38400
cctgaggtct ccttgccaga gtcccaaaag aaaccaggac tcagcaggtt gtcttttcat 38460
cttcacttac agggtcgcca agtcagtgtg ctcctaacct aattctgaac tcccttcttt 38520
cccccacagt gtaatattta cctaactggt tgttcaaatc aaaccttgaa ccttggttct 38580
cctttgtcac catatccatc agctgttgat tctacttcta aaactcactg ccacttagat 38640
ctcccgagtg tccatttctc ttcatcctgc ctacctgccc tctggtctcc actcccattc 38700
ccttaggaac agccctgtgt aggctcccat ttctctcctc ttccttcaga cagcacagta 38760
gccagctaaa agggtcttcc caaactgaac tgtggtgaca tcatccaccc ctttcttaga 38820
gcagatcacg atccttcctt tgtagttaaa gcaaaggtca gagtccaata tagccaagag 38880
tgccatgcat attttgcctg gccttccttc cacagtgaac cacccactgt gatccttgta 38940
gctattggac ccagcttctg gccatccttc agttcctgca gctcctgctc aggacctgtg 39000
tatatgctgt gacttctgcc caagacaact gtctgttccc tcacctgtgg gctcatcacc 39060
cctccttccc acagccctgt tctgcctggg tcagctcatt tgcttctcta gaaacatggt 39120
aagttacatt ttgcctccca taaagattcc aagaaccctc ttcagttcaa acttctacat 39180
atacctggct gttccctaca atagaggttt gctcttgtga cagacagcag gctccacaaa 39240
ggtgacccca ctgctgtagt gctcctgtgt cctctgctag ctcagaggca ggtataaatg 39300
tgctttccga gtacgaatta catggccagt gcataagatg cccctggtgg cagtacctgt 39360
ggatggcaga gctccagtga caggactctg ccacagtgag aggttggcgt ttccacagca 39420
catccactgc agggagctga cttgtttgat tctccctccg ttgagcccaa actcactggt 39480
ttttcttttc tctttgttta gctgaagctt gcttttactc tggaccatga gactggattg 39540
cctcaaggat gtcacatcta tgagtaccga gacagcaaca agtaagccac tcactcaggg 39600
gaaagcatcg cctacttgct gagcagctgg ggcaggcttt ctgactcggg cttcccttac 39660
aggggtgctc aacatttttg ctacatgtga gaaaatgtct ggcacacaca tacaaaatat 39720
ccaccccaaa agtctctttt gaccttaaat ataatagaaa ggaacttgta tagagggcta 39780
gagcaatggc tcaaagcacg tactgtgaaa gtgtaaggac ctgagtttta acccccagaa 39840
cccacataaa gccaggttca atagcacaag tctgtaaccc cagtattcct acggtgaaat 39900
gtgagaaaga gagaagagag tccttgaagg tcagatagcc tggtatacag aaagcccctg 39960
tgccaaacac tgtggaaggt gagaaccaca ttgaagttat cctctgattc catatttctt 40020
catggcacac actcatgaac atttgcacat aaatgtgtgt gtgtcacacc atacatatac 40080
aatcatacac gcatgcatgg aaataaagca ggtgtaaaag agttggttaa gagtaagaag 40140
tgtgttagga aaccagccct ccttttcagg ccccaccctc ctccccaccc ctccccagta 40200
ctcgcccctt gcctgcttat ctgagtcagc tgtgactttg gccttggttg tggttctgta 40260
gccaccgact ccccacttac tacttctgta gtgatcctgt ggctgtgtag ttgggaggtg 40320
gacacagatg caaagtagtg tagccctgtt agaaaatggc cccagcataa ttttaaagta 40380
ccttttctct ccttcaaaga ctgattctct gagtgtgtgt tgtggtgtgg tgtgagacag 40440
ggacagtggt ggtgagtgag gcagaagaaa tatgccttga taatgctggt gctggtggtg 40500
gtagtagtgg tgatggtggt ggtggggtga tggtggtggt gatgatggtg atggtggcag 40560
cagctcacat ttgggcacct gctctgcatt agactcatgg gaaccagtgt gtgccattcc 40620
tacttaaccc tcatcacagc ctgaagagtg ctttcattac tatgcactgc agaagctaag 40680
gcctagggaa ctctgccagc tcactctaag taatttacat acacagtcaa ctttaacatg 40740
tctacagtgg aggaagacta ggtggaagac agttgttacc actctgggaa accatcctca 40800
ataaccagta gacccagcct agacttgaga acagtgtgtt ctggtatcat catataacta 40860
tctaaactat gtaatctcac ccagctgaag gaataggcac ctgccagcat agccagccat 40920
gacctcccag aagaactcac tgctcagatg tgagtagaag ataggtcagt gttacccttg 40980
tgaccacatc cacatgcagg ttgccttctg ggtatcattg caatgtctgt atctttaggc 41040
agatgatgta cttattattg gacaacacta attcccactt catgaaccat ggagaaggcc 41100
atccagtcat cctcaatgcc tctatctccc atcttgtatg gggctacatc tagaaggcat 41160
cccagtgctt ctaaagccat tgtgtcaaaa ataccatctt ggtttcttat taagctcagg 41220
tcatcagcaa agtcaatctg ggattctctg aagccaaagg caagatggga gaactgaaca 41280
gattcctgag tggctgggca agctttctta gagactaagc acataaccca taaacagtac 41340
agcataccgt tctgcttccc ttcccttgct ccacactgtt ctccatgcct cggccctcac 41400
tcttagcctc caactgcttg tcaggatgct ctgtttactg ttagtcctct gcagaaccct 41460

cttgcctttc agccaccagc cagcctcaca ggtctgcaca cggtaccttc cagagcttcc 41520
cagtgataca aagccatctt cccaggtcat cctggtatat ttgagttatt ggaacaactg 41580
tttgtccaca gaccctatcc atgcccacat accacttagc ggcctctctg tccagtactt 41640
atcaggagac tggcagggca gccataggcc tctctctgta caagcctgac cactgggaag 41700
gaatggagca tctgggtagg gactcccagg ctgcacttac ttttaagtca tttcagccag 41760
tctatgggaa gcctcagtgc caatgccctt tggagccaac tccccttctt tagggcctgg 41820
cctgtgtctg ggctctacac acatggggta atgctagatg actcaagaca ttcaatagga 41880
agagggctcc aagacagctg cagcatcaga actgagcagc cacgtctggg actatggcag 41940
gggatcgaag tgtacctttc cctgtgtacc agcctaggcg gggggagcaa gggattctgg 42000
accaagtccc atgtttaatt aattcatccc tctgtctact tgattcttct cctcttcctt 42060
ccccctgagc aagctgatga aatatttccc agcagcccct gacaacttca aaccaacatc 42120
agcacttgcc agcacttttg aaatggcact ttctgtctgt gcttagagct attgccagtt 42180
ctgcagacta actgcagtgt tacctaagag ccactcctga cagagggtga gcacctctag 42240
gcctcccgca aatacagacg ctaccaggtc aaaacaaaga atgattttct tgttccttgt 42300
aaagccccag gtttggagaa agagaagctg aatcaactca gagataggaa gggcttgcag 42360
agctggaggc agcagagcca tagaagtgcc aaaagtgacc tcatgggaac agttggagct 42420
ggagcataca tgtggagtca gccactcaca gtgcaggggt gggcttctgt gaccctcaca 42480
gcaggtgggg tttggtatct ccatgacacc aacactcctg cttccaagac tgagctctga 42540
gatgatgtct ccccactgtc taccacacag aggggtagcc ttggctcgtc ctgttcctgt 42600
tacctagcat gagacaccaa cagcagcaac cagagtatgc tgggtgctaa aatacagtgt 42660
ttgattccac ttggttcccc taacagaagg taagaaacca tacatgttct tacttcacag 42720
aaagaagaac ctgtgatctg agagatgccc ttcccaaggt tgtatttaag aagcagacaa 42780
gcttcttcca gggtgctgct tcctctatga ggtgcatagc agacttgggc ccagcctgtg 42840
ggtctacaga gatctgatgc caagttgcct aggaatctgg gacagggaag tcagcaggac 42900
tagggttgct gctgccccat cagggtttat agtaccttta tgtattgtgt gcggcacctt 42960
catagtcgct gtctatatac atgtaatctg tatgtccaag atatttatta ggggggctaa 43020
ctcagcatca tttctcaatg aagtttctta ccagaggttt cccatactga caagcttgta 43080
cttggctgtt cagacactgt ttcccttctc aggccagaac tgtttaaagc aagcaaacat 43140
gaaagccaga aaaatgagct gattgtgtgc taaccacaga ccctttggta catgcatgta 43200
catgttccag catgcagaat gacacaggca ttatactgtt ttcttctgtg gcgtacacta 43260
gaaaaaaatg tatacagtaa actcactttg taaaacttac tttgaaacca ttatgtgcag 43320
agagaaaagc tacagaccct aagtgtgtat agttcaaggc catggtctcc aagtcattgt 43380
tctattgctg tgcagagaca ccatgactaa ggcaactctt acaaaagagc atgttactgg 43440
ggacttaatt agtttcagag ggctagtcca ttatcatcat gtcagggaac atggcagcat 43500
gcaggcaggc atggcacaga agcagtggct gagagctaca tcttgatcca tgggcagcag 43560
gcagcgagag atgggggagg agagagagag agacagagac agagagacag agaaaaagaa 43620
aaacagagag agagattaat attgattgat tgattgattc tggacctggt gtgggctttt 43680
gagatctcaa agtccatcct cagagacatg ctgacctaac tcacaaagcc acacctcctg 43740
atcttaccaa acagttcatc agctggggac taaacatgca aacatgttta tgggggccat 43800
tttcagtcaa ccccccaccc acagcagtat tagaaaatga acttagctga gtggatccca 43860
taagcctgta gaatagcact taggaggtag aagcaggagg atcaaaagtt agggtcatcc 43920
ttagctacat attgagtttg agaccagcct agacttcagg agatactctt tctttttttt 43980
ttttttaat ttatttattt attatatgta agtacactgt agctgtcttc agacactcca 44040
gaagagggcg tcagatcttg ttactgatgg ttgtgagcca ccatgtggtt gctgggattt 44100
gaactccgga ccttcggaag agcagtcggg tgctcttacc cactgagcca tctcaccagc 44160
ccgagatact ctttcaaaaa gaaaaaaaga aaaagaaaat gaacccaaac acactcaggt 44220
caggaaatag actattagag ccccctaaac acacacatac tccatccatc ccccattcag 44280
aaccttcttc acatctccaa aaaaatggaa ccattccaca agtcttagtt tttctctgag 44340
tgttacattt gggagaatcc attgttgtat atgattgtgt ccctttgttt tcattgctac 44400
agaattttcc tttgaaaagc tgaagatata ggacagtgat agagcacttg cctggcatgc 44460
acaaggcccc aagttgggtc tctaacagag cgataaaata aaatattttg agaaactaca 44520
ggaaatttttt aagaaaatac ttatatcagt tcattgagaa tttcatatac tatattttga 44580
tcatattcac ccccagttcc tctttctaac ttccccacct ccctacttcc cccatcttct 44640
tgtcatcatt gttttctccc ccctcccccc ctccccctcc acctcctctt ccccctcctc 44700
ctcattccct tccttcctcc tcctcctcct cctctttcat aatgtattga ctctaatttg 44760
ttctgtccat atacttctgg gtgcaaattg acttaccaag agctacaccc ctaaatacaa 44820
ctgatttcat ttctatccca gaagctctca actgttcata ggtcctcagc taagggtgaa 44880
ggctcataaa ctctgcccca gtccatgaca gagtactgcc taggcttgat cttgtgcagg 44940
tcttatgcag gtgagatggc tgctgtgaga ccgtgcgtgc atgtccctgt catgcccaag 45000
atcctgcttc acccccttgaa ttctgggttc cctgacctcc aactctctct aagatagtac 45060
ctgagcttta gaggtgggct tgatatgtat gccccacttg tggctgggca ctccagcgat 45120
caccgtccac tgcacacaag aagtttcccg atgagctcta agagctgtac taacttacgg 45180
atacaaaggc acagatttag agggcagtta ggctgtgtcc ttttagcaaa ataataacat 45240

```
tggccaaatt tacagaacca gatatgtgct gcctccggtg gaatgggctt aagttcagcc 45300
agtaagtgac tggctacctc ataacatttg tggcactact gcaccatggg catagcttac 45360
caccctggtc actactgcag ctcacggggc tcacagcttc ctttctctga tatccacact 45420
attgaggact attgaatatt attgaagatt ttccccacag cagcctgcag agtatctttg 45480
agtatggtga aggttaaaca gcagggagga agcttcttag taccaacttg atttctccat 45540
gtcctgtgat gggcatgtgt gggtaagcaa tagggtctta tcatcatgtt ctggtaggca 45600
accaagctat gaaaggcttt tagagctggg tataatgtag ttccagcatt taagaagtgg 45660
atcaagagtt taaggtcacc cttggctaca tcatgaaatt gaagccatct tgagctactc 45720
aaaccccttgt ctcaaaagca aaacctgatc atctattctg cattaatcta atcagcgttc 45780
tgattgtttc tgcggtcaag ttattacaga taaatttgtt tatgcttttg tgtgcacatg 45840
catatattct gcttcagtgt agacctagga gtaaaactgt tcatcctaca caattgtatt 45900
tagcaagtag caagagttca ggccttttct aactttctgc ctgattttcc agtttttctc 45960
ctcattgtgt ttttctgcct attcaggata tgaatccttt gttgactgta tatattgcac 46020
atatcagcct agagtcagac agtaatgact agagaacaaa gcaacgccta aggcactgca 46080
gttctttcct ggaggaatag aagttaacag caccactttc tggttcctgg tctctggcca 46140
gccagggaat ccctaaagct ttgattctgt tgattgtcac tttgctctaa gattatgact 46200
aaggaattga gcttctagaa tcagtgacca gagttctcca gatttgggat agccacagat 46260
agaatcatca atgaactgtt ctttttttct tttcttttct tttctcttct tttctcttct 46320
tttcttttct ttttttttta atcaaaagtg tcttttaggg acctaacttt atggatgact 46380
cttcagccct ttccactcat tccctgtgtg gtgtcatacc tctcagggaa accaatcagg 46440
agagttgaat tctggacccc acttaatcat tacaagagat agtaaggaaa ttcttaatgc 46500
atataccaaa tgaacatgct aaagaaactg gtgattctgc agttatgcat ggattcagaa 46560
atctgtaagc ccccagagcc cagaacattt aatgttttgg agttctgtga ttgaatactg 46620
aggatgcaac ccccaagatt acaaaggtct ccctagagga gaactgttaa caaaccacac 46680
cagtatgttt gacatttgct cctttctcca gtaggccctt cctccaatgc cctatggtgc 46740
tctcatctgc cccatatgat atcttccttt ctctgatatc cattgccaaa atgctttgta 46800
gcacatggtg acatgctctc accacgtggg gaaggggtta atggtaatca gcatctttac 46860
tgtctctgaa tctatagtgg tatacacagc tatactgttc tctcaatttc ctggcctgac 46920
caagttgctt cctttgcctt ctctgggtac ctgtgccagg cacacatctc tggcgcctat 46980
acagacacac atctgtaacc cagaggtgct ccagaaccaa cctctacaag cacatagtca 47040
tccggtagcc ttcaaaccca aggtggcttg ttcctctcta agacttcaag aaatcctaga 47100
gaagctgtga tctttgggcc tgtaccccat tgaatgaata ggccacacat tgctgtccag 47160
tagacagtga gccacagcct ctctctacca gtatgctgga ccagacacta ggcacattca 47220
caaagtgaga gtgtcaagtg tgtctgctct aatcacccac cccaggcatc agaggcttgt 47280
gacactcaca ggttagccct ccaggaagca ggccacagga cttcaggttg agcctggaga 47340
aaggtgccca tggccgtcac ctccagcagc tacttggcag gtaaccagaa catgcttggc 47400
tcactcagct cttggctgtg ctccccagag ggaagtgttt ctaatctgtc gtcactgctg 47460
ctcccatata ctctgaggca ttgtggcttt ttcttggtgg ttgggcagga agcctccaga 47520
gcctaaagga attgccatgc ttgatgacag acaaaggcta ttgatggcta taaatcactt 47580
agctgctgcc tggcttattt aagaggaaga ggacatgtta actattctga ggataggcct 47640
tcctgtggtg ggtacccaac tgaaaaggga tctcacagat tgactccagc tgtgcccgct 47700
gagttaagtg gaaggaaatg ccccacttag acatgacttt gcaaagccaa ccagcaaatc 47760
atcccattga cttgtagctc cacctcactg ggcatcctca agtgacccac cttaagcagt 47820
gttgggccag gatccaaggt gaggaagcca gaggctgact agctgggacg gcaccacatt 47880
gagtgggggc tgttctcaag gaggcagatc tggcttagcc ctgaatgtgg agactgtgct 47940
atcaccatca tgtccctgaa ggctgtctag agctctctga ttctgtagtc atgcctccct 48000
tgggggaagt gctccactca ccgaccgggg cttttgtctc caaagctgag acatctccat 48060
ctatgtcctt cttgttcctt atttcttcac ataagacact gtgaccacct tctcctgggt 48120
gtgtgaccta gcttcgttag agctgtttag aattcgagaa atacaattgt cttgtagttt 48180
tcactgggag aggtcataac ctttgcccgt taatgtatat atcctcttaa tgacatcagc 48240
tagacaaaac taaggtttta ataactgagg attgttcaaa atatttatgt tatgtaaaaa 48300
gtgtgtgggt gtttttacag tatggagatt gaacctaaaa gttcatacat agcaggcaag 48360
tgctccacga gctgtatcct tagctatttt taattcctta ttttgagaca aagcttttct 48420
aaatttccca agctggccta gttatccttg accttgggat cctcctgtct tagtctccaa 48480
gtaagattac atgactgctg tgccatgccc agctgaaaat gttttctact gagtctccta 48540
cactctacac agccattttc cctacagtga gtgaccgcag agtcacaggg ttttcccttg 48600
actttactga agccttgccc tgtgtgtctt tgtctctgcc ctgatgacta tcagagcagt 48660
tgtcacctca ccaccttcta tgtggtaact gtgaacacta ggccttgtgg ggacatagaa 48720
ccatagggag agaggcaaat gttagaattc tcatcccagg tgagagaagg ttatagttct 48780
gagccaagac taccctgggt gcaccataca gcaaagtgcc tgttcatgca gacatgacat 48840
gtttcccaca gctgcctttg aggacacctc ctagttctgc accatcttcc cctctctgag 48900
attctgtatg tttgtgttct acatctgcca actaagctaa actgactcaa ctattagatg 48960
cattttccta ccccatccca tcctatacca cccaactgca cctcatttcc cccatcccac 49020
```

```
cccatcccat cccactcctc ctccctcccg ccaaatccca tcatgaagtg cctccttccc 49080
tggagcctag caggttgccc accactttat gctaaatatg tgtcctctat cctttagtat 49140
aaccagacta gtcaggtggt caccatgttt tgtgtaagga atgccattca tcactgttct 49200
gctcatgaaa cagaatgccc ttttcactcc ctctgacttt ctcagtgaat tttccagtgc 49260
tgatgtcatc aaacttgact cccaattttt aacaaccctc agtctcagaa ctaccagtcc 49320
cctgctgagt acttcaagag gcgggtcttg cctctgcctg tgcaactcag tggaatgtga 49380
atgcttttga ctgtgaggta gagagtgcat attaagaggc tttgcagatt ttctgtagat 49440
tctggttccc agtacttaga gcagacctgg gacccagcca ggggctgctg aggagtttgt 49500
agcactgatg aagttctgaa cagtccctcc agcagagcta gcacactgcg gatgctcagc 49560
agacaccggg tgcacgcctc tcctcgcaag catggattgc ttcccctgca tccttaatct 49620
tagcatgatg cctccgtttc ttctaaagca ccaggcgccc gtctccttca cttactctag 49680
atggttctca tggtggaggt taagaattcc ccatctgaac tctaaaccaa ataccttatg 49740
aacttccaag ttttagattt tagagcattt gagattttat gtttgtattc cagagcctat 49800
gcaaatattc acaaatctga aaatgaaatc tgaagcactt ttggtctcag catttcagat 49860
aagaggttaa cagcctgtat gctaatcata tttatggaat acttagcagt gtgttggccc 49920
ctaagataag aactgatgaa acatctacac cttcctggaa taacctgaga ttccacagac 49980
cctgtggtgt ttggagccc                                             49999
```

<210> 6
<211> 36901
<212> DNA
<213> Mus musculus

<400> 6

```
cattcctgtg cccattgagt taccaagacc agaaaaccac tattgccatt gggctcttgg 60
gaaataaagg ttccattcac ataaggatgc ccactccaca cctaccacca tcatttttgc 120
agtcccttcc tgttcaggca agctcaccat gggagccaag ccagtgctgt tcagatccca 180
gtagcaatat ccacagccag agagatgcag aagtcatata ggcaagagcc tatatgcgga 240
ctgttacata ccagacagtt gtgtccccac tgctaaacct agagaaatgt tccacaaatg 300
gcccagattg caagaagaac cctgggaaat tctaccatgc atctcacaaa ttagaagacc 360
agtcattgtg tgtattgtaa gatcaatgta aacctcatgc ctttgcttgt ctagctagag 420
ccaagcactg tgcagtgcat ggaaacaata aaggtccaga gaacccactg agggagacag 480
gcatggaaag caatatttat aacaaatact tagggtgggg catgatggga gaaatgtcct 540
tgggctcaat cagctcatga tcagatgagc ggtgtggtgg aaacacgagg tgggagcagc 600
acaggtcacc cagctgtggc cagaaagcag caaatggcaa gaggaagggg ccaggaacaa 660
ggtatagacc ccaagaattc ccagaactca ggccctgaag tgccccttcc tcctaaatac 720
tctgccatcc tccaaaacag tgtcatcagc aagggaccag gcctttaact catgaacctc 780
gggggggtgg gggggcggc atttcatgtt cacaccatag gggtgacaaa ggagttagga 840
gccaggctcc caggatgccc agcctgggaa ggaaagtaca tgcactgctt ctctcagctg 900
gggcctcatt ggacaggcaa gtgccctgtg agcaggtgtc aggtaggagc ctgtattttg 960
acatggagag gacaaggcag gtgcctgggt gctgccaggt ggaaagggca aacggcctgt 1020
gtgtgtgtct ggtgcagtcc aggcacgtgc aggggaagcc cagaactcgc tggatgggaa 1080
cacacccatc taaagcactc tgaacccagt tcataaaacc atgggtcaat attttcaaag 1140
tcacagaact aatgagctct gccagactca acagaccgca tcccagtggg tgataagaca 1200
agtgttagca cagaggaaac ggcccaggcg ggaagaggct tttcttaatc tgttgggttt 1260
cgtgtttata gtaaagcagc tgcccttgga caagagtatt catttatcag gtcacccaca 1320
aaggaggctt agttactatg ctcaccctgt ttgggtttaa gtaataactg tctacagaca 1380
agtaaaaatt ggatcagggc aagttcagta ggtcccatca ggcctgcaga agctgtctca 1440
ggctctgact gccaagttcg tgtgcctgtt gtccagcagg aataggcaga gagaaagctg 1500
tggaaaccct agcctagccc cgaagagctc tattttcacc ctttaaaaat gtgtgttgtc 1560
ttccactcag tatttctgtg aaacagcagc aaagaatgat tctagtgtgc tcatttagtc 1620
cctgaacagt tcatcagcat cccacttgtc tctgggattc ccaagaccat tcaggcctag 1680
attccccccа cacctttctt cccacggctt ggggtctgca gaggaaagtg ggcagaggaa 1740
ggggaagagc cagctcacat tggtaaggcc ttaccaacca ggaaaaataa ggatggcagt 1800
gacccagcta agcatcctga gtactacaga ggaggctttg tgagggaggc ctcacttcca 1860
acagagattc tgtcacctcc tgagtcctgg actaaggtac ccagagtcac cttctcactc 1920
ccgctagctt ctgtgggttc agtgacacag atcaggaccc aggctgtacc tggaagcgtc 1980
agtctcacga gaggtcttat cttactcatt ctctgttgtc ttgaggtaaa aacagcatgt 2040
gcagaactgt aaggtgctgc tggtctttgt aaataaagaa ataatctctg atgaaaagta 2100
tttaaagcat ggaagtgcac acctataata cccacactcg ggaggcaaaa acagaaacat 2160
tgccataggc ttgaagctca cctgagctat gtagtgtagc aagttccaga agatctggac 2220
tgtatggtta agactgtcac caccatcatc atcataatga attgtatatt attataataa 2280
```

tattaaaaag tatttagtgg ctgcttccta tgtcctagtc actgttcaag ggactgggag 2340
gtaagctgtc tgagctcccc aggttagtga cattgagcag ctgtgactgg cccaaaagaa 2400
tgcagggaca ggaagaacag gaaaaaaatc acaagtagtc aggtagagcc ccaagctagg 2460
actgcagtag gcagagcagg agtgagcaag ctcacacggg caccactaag agctgatcca 2520
accatggttt gtccgtgact gatggctttg gagcaaagca aggatacaag tagaagccac 2580
actccaacct aagagtgtct ggctccagga tgcccttctc ctgaaccttg gacttctggt 2640
gaaaacttat ggatggtgga tccctaatgg tttcccaagt gcttgtcttt ctaggaagct 2700
tattttaaac tccaccccca tgcaaggtca ggctatggct tactcagata caatcgtaaa 2760
tgtcagcaaa gccatggaga agatgaagaa gtaagaagga tcatctccct tttaccctcc 2820
aaagactgaa gcctgtggac agggccctgg gcagttcacc caggggcttg acaacttaca 2880
cagctctgac tacgttccta tgccagatgc agtctgtctg ctcctcccat ctgttctggt 2940
cttccccaga gcctcagacc agcagacaga aatcaagcca tgcttggttc tagatctgtt 3000
gcaggtgcag tgtgcatggt gggaagggga atgaggcaga gcaagcagct tgagtcactc 3060
atgccagggc tccctccact aatatccctc cctagagatg gactcaggtt ccttccacag 3120
cctctgcagg cctggtcttg tattgcccag acagagatca cctacttcag aaggggcact 3180
cagtacttgc agtgtcctct tgattggatg gaaccaaaca atgctgggac acaggccatc 3240
ccccagaccc acaggagcag ctccaccatg caaatctacc tccagcttga ggtgggctgc 3300
ataggtaagc tgatacacaa ccctgcttgg taaaggagaa gacaaagtaa cattcaatac 3360
aaaaaaaaaa aaaaaaaaaa aaaaaaagag tttgagggtc tagaccaact aaggcttgga 3420
gttctttagg gagcagcatt tggatttcat gtaccatccc agagcagggt tctccaaaga 3480
gaatagctta tacctccttc ccacttaaca cagccaccca aggccagaaa acctagagaa 3540
gccaaagctg caggacttgg tggtgcccca cccagatctg ggccctgcca cattctggct 3600
ctagtcgtct tctatagcct ctgagactca gtttcccact gtgcacatta agacctacag 3660
ttttttcct gggaaaggac tcattgggct aaatgacaaa gcacacagag agcttggctg 3720
cactctcttt tcttcccacc attagtggcc tcaccactcc agggtggcct tggaaaatgg 3780
ggcccacccc gccccccccag cagcccaagc aaagcacact ttgaataaag cagagcagcc 3840
tgagctcccg ggtgacctgg ctcctcctct cctctctcct ctagagctat ctcttgcagt 3900
tgtatgtgta tgagaggatc cgtgtgttta aaacaccctt ctccctagaa catcttcata 3960
cccaaattct agctttcaaa ctaaagttga tccctcccaa agtgagaggt gactttggct 4020
tccctgagtt tatccaagct ctgttcttgg tataggtctt cagggtcagc ctcctctact 4080
tgggtgtaag agggagccct ggccttggct aggatctgag cagggccaga aagctgttgc 4140
aggcaggcag cagctcccag agggaatgtg cttctgtgtg ccttggccac acctcctcta 4200
accagtggtt ccagtttcag tggaactaga gaaaggctct catgtgtgtg tgtgtgtgtg 4260
tgtgtacaca tcataaaaga gccagcaagg cccaattacc cttcactgca atgctacaca 4320
gcacaatgcc tggttctgct taggggccag agctgttgcc cacgtgcagg cctgccccgt 4380
gcctctgtgt gcagagctaa gccttgggaa gagcaaggct tcgtggctag ctttatgctg 4440
acaaagggct ttcagtgctg tcaaatgact gcaagcagtc ccttcccccc ccctaccaca 4500
gccactgggc ctccctttgg cagggccaga gggctgcact tgaacgccta gcctctggag 4560
acttcctttt gaactagaaa aacatggctc aaacatgctt cactgcagca gggctctgcc 4620
tgctgaacct atagaaaggc ctggagtaga ttcagtccca cagactagaa aacctggctc 4680
tggcctcacc cacaaggcct gttatgtctg gctccagagg cctgctcctc tggggttttc 4740
catgcctgtg aactaggccc cattcatttc cctgcggttt catgggaacg tccaaaatat 4800
tgagcaggtt gcagggagcc caggaggaaa ggggtcagtg aaaggcccta gctgtgacgt 4860
ggggtggccc tgtggtcaag ccctggtggg cgccttgtca gtctgctgct gcctctcctc 4920
ccaggcaccc cttccactcc cctgaagctt ggcctgcagc agcactcccc ttccccaccc 4980
ccaggcctct actttccagc tccctagcca ccagccccac cctggcctgg cctcagaggg 5040
aactgcaaca agatctctac agttccccac ccccagcatc cctcaattta gtactgatca 5100
gaccactgac ttcccatcac gccccattcc cttgcagttt tccaccacac tacactcaat 5160
ttggggctgc tgagagagca gcaggtctcc tgtgagggtg gctgctgtct tcccaccttg 5220
ggctgcccag ctatagagga gagtcatgct ctagcacaca actcctgtga gagcccagca 5280
gctgccttca cagctactgg ggagcccaag ggctccttaa gccaacagtg aggatgtacc 5340
catgtggggg aaatttggtt tgccgaagaa atgaatttga aactagctgg gagcaattct 5400
tatcaaattt ccatgttagc agttttcacc aagaactaat tgaacaatct ctgtgagtgg 5460
cctaattcca ttagcatgag attcccacaa agttaacaag tgccctagtg gccaagggca 5520
gagaggctct tctgtctcac acttggtttt ggtctttgaa gatggatgga gtttcaggtt 5580
tcagcaacag ccaggcagat gctcacctct ggcccagtag gcttcaatct cagcagctca 5640
gctccagatc aacttcagaa gccactttgc aagtattcag ggtatgaaag ggctgatcag 5700
accactgact tcccatccca agatgaattt ctcttctggg ttagcaggta aaatggatct 5760
gagggtagaa catcctacag acctcacctc ccttgccagg cagtattgag agaccaggta 5820
cagaggagta gaaaatatga aggcaaagtc tgaggagcat gagtctggac agggcctgcc 5880
ctcagcacca cctccccacc tgaggcaaga cccaaagtta gtgccagcat ctcactgttg 5940
tccagaaact gagttctagg ggcagaaaca gcagccacct gggacctgtt cctgtccttg 6000
agccacagcg aggtagctgt tcctagtggg tatagtactt tctcttctct ccactgccca 6060

gtgggcttga cagttccagg gacggtgctc tggggttacc catcagccct gtggcatcat 6120
gctagatgag gagcccagag aatgaagcat ctagcttctt tgtccctgac tagctataga 6180
ctgagcaagg gtcctctctt cttgacagct gcagcatggt gtcagcattg actgctatga 6240
accagccttc ctataggtag catggtcagg acagaggttg cagacctacc tacaaggccc 6300
ttccttaacc tgctctacaa tgagacataa gccagtgact cttcccttcc cctcctctgg 6360
gcctgctgga tggcttcctg cgggctctct cagggcatga gcccttgcct cctagaatac 6420
cttcgacttg tctaaaacta gtcataaggc cctggctcct tccttctgtc actgactcac 6480
caaaactcaa tggagcattg cctgcacttg acctatcacc ccttccctgt ttttctaaac 6540
cagattcccc agccctacca ccctggtggt ttgcctcaac ttgccagcct caggggcctt 6600
ttcttaccct ttcctctgcc tctgcagcac ttctcacagg gcagcctgct acagctcctc 6660
catgtccctc tgccttattc taccacctct accttctctg ttctggcctc ctgggggcca 6720
gtgcacacgc cttcgtcacc tggctcgctc aagccctccc ttaattgtct catccctcat 6780
ccggtcctac tctgtccccc agccccaact attcccacat acttatttga aacatctttc 6840
ttgctcagta gccttccagc tcctgagtgg ggtccaagcc tgtaccctca attccttgcc 6900
tttccacctc gagctttgtg tttcatttct ggttccttga catcccttga aatgaatcct 6960
gcttgtgagt gtacctccct gtggatggat atacctgtgg gcgtcttagg aagtatttag 7020
gcattctgat tgcctctgag gccactggcc ccaagagcac agactgatgc gtagggatat 7080
aggacttgga gcagatcact tccctatttg cacattaagc tcctgccacc cagaaagata 7140
agaacattgt agggccatag gagaagtgat acccagggtg gagtgaggcc acagctagaa 7200
aagatgagta agaaatccaa caaagggatt caaagctagc tctgaaagct gaggcctacc 7260
agccattgct agtgtaaata actctgctgc tgtgtatgaa ggaagtagta ctcagtagat 7320
aaggaagtag tactcaggag ataaggaagt agtactcagt agattggtta gggcctgtag 7380
agaaaagatc aggagacttg gtgaccccaa attatcagca tgcctggcag tgagtattag 7440
gaagttagaa acacctgaga actaaacaga aaggacaata gtgatagagg gacccaacag 7500
tcctacctcc tgaactggag cctgatgcca ttgctcccag gagtccttca ctctgtgcag 7560
gttgttgaac atccactctg ggactagcac atataccact agggatggag acgagataca 7620
acctaggacc gagagaggcc atcacagtca tgaaggccag atgctatgat ggggaccaag 7680
aggatgctaa gagagagttc ctcatgctat cttccaaact gagtgatagc caaagaaagg 7740
acatgagcga ggagcagccc tagtactctg ggctgtgaga acagtatatg aaaggacaga 7800
agccaaaagg gcctcaggac ttcagtagag ccaaagtagg atggagcagg gaagaagagt 7860
gatgcagtcc aaacatacat aaaacatacc atattgttta gccaggtaga ggaactgcta 7920
gtcttaaaca gtggttcctg ctggaaggga catgaccctg ttttgtgtga aggcaacaca 7980
gtagcaggag atgacgacct ggacaacagt gatgacagga aggaaagcaa gagatgcttc 8040
tggaaatcta ctccagatcc tagaactgga ccatttgagc aactcttgca taccctgttg 8100
ctctttaaaa agaggaagaa agaaaagaaa aaaggaaagg aaaggaaagg aaaggaaagg 8160
aaaggaaagg aaaggaaagg aaaggaaagg aaaggaaagg aaaggaaagg aaaggaaagg 8220
aagaaaggaa gaaaggaaga aaggaagaaa tggaaaggga aggaggggag gggaagggag 8280
gggaggggag gggaagggaa gggaagagaa gagaagagaa aaggagaaga agagaaagag 8340
aagaagagga gagaagagga gaggaaagga aagaaaaaaa gcaataacag gacaggtgcc 8400
cagacaagag gaggtctagc taggctaggg tagacacact gtagtctgag tggtacttat 8460
ttatggccag gaacttggtc gctgattttc acttggttgg catgcctgcc ttcctcagag 8520
gcttctcacc taaccactgt ctgacctgtc aggatgctga ggttatgtag actgaaagac 8580
cctacataga gaaagacaca atctcaaaaa attaggtaaa tagcaaataa taaccacatt 8640
tggacacaag taaataaaca tggcccagtc tgggtcctcg gatggtaggt gcagtgtcca 8700
gcagcataag ttgtgttgag catactcact tcctaaggta aagaatgcct ataatagtaa 8760
taaattgaca gcagtgtaaa tttgtatctg aacctttccc tttaagtggt atcagtaccg 8820
ttctgggcgg aagcttcctt tcttatgaca tggaatgtgc atctctggtg tgcacttata 8880
tataggttga ttatggcttg ccaggacatg aaaccctggc tcagctggtc cctgggatga 8940
gaaacagcaa accttccccc tctttcccca ggccttgcag gcccagacag caggtaggga 9000
ctgcttgaga gagggctgca gagctttcac cgtgatgtcc tggctgacag cctcctgtca 9060
cagaagagtc ctacccaaga cctccagagt tgtggggccc cagtggctca ggcctccaga 9120
tgctcagcag atgccagacc tgggactgag gccccatctc tgagggcttg gcttgctgtt 9180
ctggaaggtg atcctggctg tcagccattc ttgagccccc atttagagca gttgtcaggc 9240
agttgctggg attcagctag ctccccatcc ccagcagggc tgagtgatct catgcctatg 9300
cgatgctgtc gcctggggag gaggtgccct aagactgaag gcaggtgccc agaccagaag 9360
gagagtctag gccatggcaa cccagacaac cctcagccac tttcccagtt ccatacccta 9420
atgtgctcca gcctggttca tttgccctgg gatagcacaa ggcatcattt gagtttggct 9480
gcaaacttta tgtgaagttt gccccctttcc ccacaagaga ggaaagctca gattgataag 9540
ctcgcttgcc agagacccca cagccaaccg gtttgcacag aaccctcagc ccaaaaggca 9600
gctttagcta acgaaacagc aactggcact ccagggaccc ctggactttg ggccacaatt 9660
tgtaaactct cgagctattc ttcccagaaa gttcttgggt tctaagtggc ttttgccacg 9720
tcccaggact ggaacagaag agtctggtgg ccccctgctg atcactgtga gaactgcaca 9780
agggtagaca ggtgccagca agaggggcct tggctagccc caggtgagag gagagatctg 9840

tgcacccctc catgggtgat tggccccaca gggaatctta agttcagtgg agctctggct 9900
gctgctggtt tggccatgtc tcagcctgtc agttctagat cttctagatc ctgggcctcc 9960
tgggagtctg ggagctcctg ggccagagta tcgctgggtc ctttgtgatg tgcacatgct 10020
tgctccttcc ccttccactt gcaggatgag aggattttaa gatcatttcc tcaaaccacc 10080
ctaggacact aacgagcctt atccgcaccc agaagtggga actttgttcc gtgcatcctc 10140
ttggttggtg acaggattta agttaatgct ttgctcttga cagactgttg tgaagaattc 10200
ctaggctgat gtcttaactc agagggagag aggaagcgaa gggcagatgg acaggggtg 10260
cagaatggac agatggacaa gggctactaa tggaaatagg aatcacaggc accaaggtgc 10320
ctgaacaagg ccagcctatg caaccagagt catgccagat tgtgatcaga gttagacatg 10380
ctcttctttt ctcaaggtct tgggcagctt acagggctgt gcagatgtcc atggaggata 10440
aattgtcagg tcatggtcac tggagaagct gcttgcctgg agtcttctca tgcctgtttc 10500
ccatagtggc ccctccttca ccccatctct cttctcccac catgaactca tgtggaacaa 10560
agcagaagag ttcctgtgga ccaggactct ggatcatccc atcaaagtct ctgacttata 10620
gcttggagca tggagaaggg tccctgtcct gagccattag cccaccctgc tcctgcctgc 10680
ctaacagcct tatcctcaca gtcctgctgt ggggccctac tgccacctgc cggcttcatt 10740
tacaaactgc agtcctagtt cagccttggg attacaagag actgtgtact ctggtcaaca 10800
ggattctgag actgcacaaa gagaacaggt ctggaaacag tcctgacttc ccatagcagt 10860
gtcagagcat ttatttaaca gtctgagcag ggacagacag catcccagca ctgtggaggt 10920
tgtgacaagg tgaaggatta tcagatgtgt tagtcatttg tgtggtgtat gtgaagaaag 10980
gaaagcacca ctgtgtcttg gacagttgat attcctgctt ggtatctggc ccagaacaca 11040
tgttccctct gcctttgcac cagccctgtg atcagacatt agcattgtct tactttggga 11100
aggaagaaca ggagattcac caggggttcc acaacaagag tgtggtagaa ccagcattca 11160
aactgtctca gaggcttggt ggtcagtgat ggtgattgtc agtactgata agcacaagaa 11220
gggattgggg actgagataa gggtgtcagc ctaaaaagct ctgcctacaa actagtgggt 11280
aacacaaagg cttttcttct tgagctgagt ctagtgagtc catgacagaa gccaagtgtg 11340
cagaggcccc catgactgga gctaggcttg cccaggcccc aatgacagga tcgggtgtgc 11400
acaggtcccc atgacaggag ccaggtgtgt ccagacccca cctagtgggc ttcatgagcc 11460
ccttgtagag aaagctctgc aaataggcac ctagacagag cagaggcaag cgtcttcaca 11520
gcaggtccag tctggagaag gaacattctc ctatatgtct gattttcctt ctaagaactt 11580
gtctagatga cagatctgac caagcaacac tactcagcct ccagtagagg gatttatccc 11640
aggtttcctc agacactggc agactctcag agctgcctca gtgggagaag aagactaagg 11700
ctcaacatgc agcttggggt gtctcctcga agctgaacaa ggtctctaat ggcttttgcc 11760
ttcccaggga gcaagctttt tccacacagg acatgctgac tatagtagta tcaggatgta 11820
cacacctgaa agacttcatg ttcaatccac ttattcacca agggagcccc aagggtcagg 11880
ggagaacctg cctgcccagg attgaaatac aggtaactaa cttcagggct ggttgactct 11940
gtctcctgct gtgcctggct tcctaccctt gacacacttc ctccatcttc catcagtccc 12000
cacctcttct cactagggcc ttgacatatt ttcatcttcc tatttagagc tttatcccca 12060
tgtacttagt tacttatagt aattctaatt acactgaagt gaaggaaaat agaatgatag 12120
ctcttcttac aagtgagccc cagaggaagc ccagcaggtc ttcttaccag agatcattac 12180
tgtgtatcat ctctggacca ggcatgacct gagagcatcc ccatttagtg agaaatgaga 12240
caggagacca catacacatt cagaccaaaa gagaaagtca ttattgacag gttgactcta 12300
ggaaatctga gcatggagat gaaagagaaa gagcagaaga actagtttga tcaggtcaca 12360
gaaaggttct tacactgaga actaaggtat tagagaatca gctgagccaa ggccttggga 12420
caggggcagt agcacctgtc tccaggatcc ctctagttac tgtctatcct ccacaggctt 12480
gtagaggagt tcatgctcct ggccaacatg gcggtggccc acaagatctt ccgcaccttc 12540
cctgagcagg ccctgctgcg ccggcatccc ccaccacaga cgaagatgct cagtgacctg 12600
gtggagttct gtgaccagat ggggctgccc atggatgtca gctctgcagg ggccctaaat 12660
gtgagtgcta gtgggcaggt aatgggaaga cctgcttgga gaaaagagat taaagcctag 12720
aagttgggct ggtggtgact tgtctgcctc catgtagcca ctccctatgt agccaggtca 12780
gtctcccctg cggtggagaa gatggcatcc actaggggta ggctctatta tcaggtctgt 12840
accaagggag actattcaag gtgtagccac ttgcatggcc tctagcaagg actggactgg 12900
tccttgctga gccagggtaa caggaagcaa ggaatctttc ttagagggaa gcacttcaca 12960
tgttcccttc tcagaggtaa gctttatgag gctgcagaac cagtgtcctt gctcatccca 13020
ccaaaaggag atctcccacc catgttccaa gatggaggtg ggtgtgaagt aggcaaagga 13080
ttcctctaat aaagagagct ggcctattgt aagcatggaa gatcttaggc ccattgtatg 13140
acacagacta tggatcacag ctcttacacc ctgcaggtag tcaacatggc ccatagcctg 13200
ggaacccctc tctaccttcc ccaaaatggg atcaagcctg tttccaaggc caaccatatc 13260
tcatacaggt ttctggggtt tacttctaga aaagcctgac taagacattt ggagatgaca 13320
agtactctct ggcccggaag gaggtgctca ccaacatgta ctcccggccc atgcaggtaa 13380
ggaggggcca caccagcccc tgatcccagt agtacccata gctctggctg gcaagcacca 13440
cgtgtacata gcccactact gtcttgctct gctctgggat ctactggata gagaggcgct 13500
gaggaacact atctggcaag aaaagctgca gtcacacctg ggacaggcgc actgagctcc 13560
agaagaaatc tatcctctgt gctgaaaagc aggctccatc cctcaggagc tgtatggcct 13620

gtggctgcta gagaccccag gcaagagaaa aggtctccat ctctactgta gctgcagtct 13680
gcaggagaat cagtctgctt cgagcttggg cccatgttcc caagcaagtg acagctagga 13740
gatagatggg ctggctccta gcaggctgtc acagccctcc agcctacact gcagtctctg 13800
cagggcctaa gcatccttgg gatgggagcc atctcagtag attggcaggt caattggagc 13860
tacaggtact aatggggtca gctgtgggcc ccagcacttg ccagggcagt ggcaggccat 13920
ttttcaaggg tcactctcaa cagattcaat ctgttcatga gagtcaggta gcctcagcca 13980
gccacagctg atttatttcc tgataactcc tggctctact aggaatggag ccatcagggc 14040
cgttcgggga cttggctgcc tgttccccac cctaccacct accctagaca gtgcacacaa 14100
gaccctaggc tgtgccctgt ggagtgctgc tcccaccagg attctgatgg caaggactaa 14160
gtggcaagtg acagggacag gtcagggcac agcaacagca gcacaacagt ggggagtgag 14220
gcctggttcc caagagagct gctgaaacag gacacaagct gtcccagtgg tctctggcca 14280
ctacagagaa gccatgattg ttgccctgcc cagagatagc tacactgacc aaggaggagc 14340
cttgacctct tttcctcctc acgctgcctt tctgaggaac tgagccacca ctgaaaacaa 14400
agataaacat gacttactat gaagactatg ccctctgtcc ccagcaactt gccccagatg 14460
tagctcaaga tccagcaggg ggctgtgctc tgagttctag ggctatgtac atggagtaac 14520
cagaaaagga tgtcatttgg ccagggattc tggagctttc aaagaagtga acatccttct 14580
aggcaacagc tgctgattcc aaggctgtga tggctgaagc cagacctcat ctaggttgtt 14640
cctaggttgc agcggctcag tggttccttt ggctcaggtc tcttagacct gtggatcacc 14700
gtggacagtt gttcaggagc aaactgatgc aggctggcaa gctaacaaac taccctcttg 14760
actggcatat gctagagtat tgtactgtac ttgtacttgt ggctagtgtg accatcaact 14820
gggaagagat cagagccaga ggaaatatgg ttggctcagc cagaagctga ggaaccttac 14880
gggctgctct cccttggagg ttggcatctt gggctggcca gggacatgcg gcatcctcag 14940
tttctgcttg tgtctccaga agacaattca cagccctggg ccaacatggc catatgtttt 15000
cctatctgca atcatcttga cccagggtga ctgctcggat cctaaggaaa attattccac 15060
agcaactcct ctgcatcatt cctggtaggg actcagcaac cataggcctt aaggaggaag 15120
agcccttgca cagctgccct ggtggctagt cccacagtgc tagaggccac ccagcatcct 15180
gagggcttcc agcctcccat gcccaacaga ggcatagctt cctgagctgt tgcgagcatt 15240
gccctcatga atggagcccg gcagccctag gcatgactag catgcatcct gagcagggaa 15300
gggctctggt cattacatgc tgtccatggc agctgctgag aacccccttaa gtaggatgac 15360
cctggcccca agaatctggg gctttgatca gctgcctgaa gctgataggg gaggtgtgta 15420
tcaaccttgc catgggccag gcttgggtct cagcacctag ccgacccagc caggcttagt 15480
cccactctcc ctccagatgg cactgtactt ctgctctggg atgctgcagg accaggagca 15540
gttccggcat tatgctctca acgttccccct ctacacacac ttcacctctc ccatccgccg 15600
ctttgctgac gtcatagtgc accgcctcct ggctgctgct ctgggtaagg gacatgactc 15660
tggcctggga agacctttgc tggtcgagag ttacccactc tcagagtaag tgaccacatt 15720
actgttatca tggacatgcc gagggacaga gaagcctaag tctgaacact gtcgatccac 15780
acccagatga tggaagcttt agtgagactt attgcaagcg cgggaccata tatggtccca 15840
gagccttgcc tcagcacaca accgtcctta tccccatact agcaaccctg gtcgccctct 15900
cctccaggct acagtgaaca gccagatgtg gagcctgata ccctacagaa gcaagctgac 15960
cactgcaatg accgtcgcat ggcttccaaa cgtgtgcagg agctcagcat cggcctcttc 16020
ttcgcagttc tagtaaaggt gagtgtccag cctggcccct tcttcttccc ctttccctgt 16080
cctccgatga atggagcacc agtgcaggtc ctccctggga ggatgccacg atgcattgtt 16140
cctacaggag agtggccccc tggagtccga agccatggtg atgggtgtcc tgaaccaagc 16200
tttcgacgtg ctggtgctgc gctttggggt gcagaagcgc atctactgca atgtgagtat 16260
ccctggtatg aatgggaggc ctgcacctac aggcaaaacc aaacccattt tcccgcctgt 16320
gtctagttcc ttgttgggga aatattcccc tggtccagaa tatcccatga tagtttcaca 16380
ggtgtaaatg gtgggattca actgagctcc cttctgtccc tggccattag ctatgcaggg 16440
cccacagact gcatcctata gcagtgagtt tcactggcat gtggcaagaa agggtccaga 16500
cccctgaacc caagtaggcc tgcccaggac agggcctcag gccaagggtc aagtctgaac 16560
tcttccttaa aagcccaggc actcagaaca taaccaggat ggcagggtgt gggacctgtg 16620
atgttcttat agaaacatgc agaaggggag gccagagggt agccagcact gctctggaca 16680
ctgtgtcccc aaacagaaac aagaggccca tcctgccttg gcttcttccc tggatgacag 16740
tttattcaaa gtcctcttgg tgccttctgt aatgtcactt ggggggcttt gctttagctg 16800
ctctgtggtc accaagtcac cacctggctc ctacccctgg ctttgaactt cttacataca 16860
cttggggaag tgtggaaccc tgcactggaa gagacacagg attcatgaaa gaggcagaac 16920
aggaaagggc caagtgcagc tggaactacc agacacctgt agttacctgg ctctcagcct 16980
ggtggtcagg tctatcacca acagcctagg cagatctctt ctctttgcta cagtcaccac 17040
cctcccacat tgtcccttgg aattgggtca ccttcaggtt ctactttgac caaaggtgac 17100
ttagcagaac ctcctaaatc tggctgaggt ggaccaagga taggggggctg ggggatgtct 17160
ctgtccaagc aggcagctac agtaaggcag ccggtacaaa gctccctcca gccagtcaga 17220
aataggcagg cagggcagaa gaggtgtctg aagcccatag cctgaggctc cggtgtgtcc 17280
ccctgccccc aggcactggc cctgcgatcc tacagcttcc agaaggtggg gaagaagcca 17340
gagctcactc ttgtttggga gcctgatgac cttgaagagg agccaacaca gcaggtcagt 17400

```
cccctgctgt gtccctaagc ctacctctgt ctcaaacgtg tgcccctagg tcctcatctg 17460
ccctcatttc tccccagcac cataggttcc cctgtgggat tccaccaagc cctggcttag 17520
actgccaggt tctatatggg aacacccact atggcagtgg ttctcaacct tcctgatgca 17580
gcgaccctta acacagttcc tcatgctgtg gtgacaccct tcccccagcc attaaattat 17640
tttcgttgct acttcataac tataagtttg ctgctgttat aaatcaaatg taaatatttt 17700
tggagataga ggcaaagggt ctcgaacgac aggttgggga ctgctgctct ataggtagat 17760
aggtgctatt cctctcccct gaacagaact tttcagaaat tttgagaagc tgataaaagc 17820
ttcttttatc cctcttgttc caaaggctgg cccagcccag ctcggcccgg cccagcctgt 17880
tttcttgctc ctcgtgaatg gtcactgaat aacaaatgtc tacatagtgc catttagcct 17940
actggttttc cccagaccca atgaatccca tttacagata ggcgatagag gctcgggaag 18000
ttaagtgagc ctcagtggtc agttggcttt gattgcaggc cctcacctgc cctgtcctct 18060
cctgttcctg gctctgctac aggtcatcac catcttcagc ctggtggatg tggtcctgca 18120
ggcagaggcc acagccctca agtacagtgc tatcctgaag cgaccaggcc tggagaaggc 18180
gtctgatgag gagcctgagg actgaatgct agcccaagcc aggcctgtgc ctgccctacc 18240
ctgctggctt ttaggaatag gacctttga caccaaaggg gatttttaat ttggttttta 18300
acaactcagg ggtttgtttt tatttttatt tttcctttta ttttactttt gcagctcagt 18360
ttttaaatga actggaaggt taggggtcag ggcaggggat gctgaggcct ggcctgtgct 18420
tccctgagca gagaggatcc cagtcctcct gggcaggcag ccccgcttct accaggcgac 18480
ccactgccct tccctgccca ggaaatgggg ggtttcagca aatcagtgtc atggaataaa 18540
atcaagtgtg aattgctgtc tgtgtagatg ccatgggcaa gcatggcagc tgggtggcct 18600
gtcaccgagg gcaaggggct ccctagaatc cacctcacag ctgagctggg gtcatcagct 18660
caggaccttc ctgccagctc cagggtgatt cacgagccat gtgtggcaga ttgatgctgc 18720
agcctccttc tagctgatta aaaatgtaat tagtatgcac agtagggagc tgccagtcac 18780
cctgtgcatg tggctgtggc cctccctccc cgcccttcct ctctgttgcc agcccatggg 18840
atgtggggag gtgggactac cacctctctt cttatatatc ataggccaaa gctcccagga 18900
gccctgttca cagctatgct atgagtaggt acctcaatac ctgcagtttc aaacatgtac 18960
cctaaaaggt aaaggcagac cttccagagg gcaggaggac ttcaaaacag atcctacctg 19020
acccagccac ctgcttagca tcccaagtac tagcaattcc tacccttctg agcactgggc 19080
agcctcttcc ctagggaact gggcacagtg tatcctcctt tcaccagact ggaatagtat 19140
gaattggctt caaaagcaac tagaatctag gatgaaaacc aaagcaacca aggccctgtt 19200
ccccagtgct gttccctgtg gcatcaggat taacagaccc atctgatatg gttatggtga 19260
ttttcttcaa aaaagattct gtggagtccc ctggcaggtt ccttgcagtg agtgactggc 19320
acagctgcaa ggatatcaca gccctaggat gggctgttgt ctgaggagag ccacagacac 19380
gccccacctg ccctgggctc cttgtcagcc tcacacagcc ttcagctgcc tgtcctccca 19440
ccccttaggt ctcccttctg ctcccattcc cagaccagca tatctggata ggcagagcag 19500
tgatggatgg tggtttagta tctgggtaaa gaagactctg gtgctttgcc aatcctggat 19560
ctctagacta aaggctcatc ccacaaatct gaggaggagc tagcttctct gctgggccaa 19620
acccgggctt ccaagacctc ctttcactgc ctccttcaga atccttaagg aagctgtggc 19680
tcgagtactg ggttctctca agacacagag gtggctgaga cacggcctcc ccaaccctcg 19740
tgaggaacag cttaccagtc agtaaggaaa gtttttgcag agtgaacgtg cttaggaggc 19800
aggcactgga ctagaaactt ctataacagg cttgctccac cctcaggttg gacatcatgt 19860
tactgagaac tctgagccat agcagtcctg ggttgcccta acctgtctga caaatggaag 19920
tctcaggtct ccatctgagg tggtgcagcc aggccgccct ggccaggact tgagccacct 19980
gtcctctgtt gcctcccagt ggctctgtca tcttcccaca gcaccagctg agtcacttct 20040
ctttgtgttt gttcacccag cactgagtca gagaactgat agaacgtgtg tccacacacc 20100
actcagtgtg gcagttggca ccgaacacta agggcactgc tggcagaaga gatgacaaga 20160
aataaacgaa gtactcactc atcagctatc caagacacct gcctgcacta taggctaaag 20220
cacagggcac agagcagctc actggctttt cctcagtggc ctgtcaggtt cacatggaag 20280
gaagacagac acaatctcac tctgattggg gtctcaaaaa gctcagaagc aggcagtatg 20340
ttcccagggg aaaatggagc aggttgtggg tccagcatgg atgagaaagt taagtattaa 20400
ttaatggttg taacctgccc tcctggggag agaggctgac accctgcaca gtcctactta 20460
gcaaagagcc ttggaaagga cttcagtggg cccaggatgg cagtccaccg gaagctggag 20520
cacagcacac tggaggtatg gtaagaggga gctggtgcca ggcagaggca tcccagatgc 20580
ataccgcaac agccagtgag gatacccact gcaccaccat gccagctagc cactaaagca 20640
gccagtgagg gcagtccagg tgagaggagg aaggcctgag aggagaaaaa aaatatccaa 20700
aatcctgggg tgggtggtgt cccaaaactg aggcagcata ggcacagtgg gagcagcaga 20760
gacctgcagt ggctcctgct gggaatgggg caggcctgtg aaggagagag ggctgagcca 20820
tagggcactg gtgactcagt gagatggaaa gagggaccaa gtgtagaaca gctggaccat 20880
gagaagagag catgcagggc agttcaagaa ccttagaaga ggccatgtgg gcagagtggg 20940
gctccagaag agggtattgc agtcaatggg agctaggagc ctggagccag atctccctct 21000
gtgaaggtta ttgattatca gtttctgaag gatacaaaac atccactctc actacctccc 21060
caagaccagc aaaggcacca atgagcttgt gttcagggat ccattgtgag gggaaatggg 21120
aaaataaagg aggacgttac cctggtagct gagagtgagc cagcagtccc tgttagactg 21180
```

gagaaaggca ggtacgaggc catccacaaa gaatgctgaa gcaccgagct gcagtactgc 21240
acagcatcca acaaggctgg gctgctctgg gctgggggtg gagaaggatg gctacagaag 21300
tcagtgttgc cactgtagta aataaactga cctcttccca caccagcagg caagagagcg 21360
atcatcggag agtcaccagg cctggtagaa tctcctgtga taggacccca tgagatgcag 21420
cagagggctg ctgcaggatc cagtcagccc tcaggccttc agcagccagg caggagattg 21480
aaaacatctt ctccggggcc ctcctgtccc cacatgaaat acaaacttgg cagcagagtt 21540
tccccagtga gatcccagcc aggcttctca tggggaatca gcctgccaag tccctagggt 21600
acttgggctt ctagtcactt tgtgagtcct atctgtaaat aaagataacc agggaaactt 21660
ccttttaaaa ggaaaatagg tcctatggag aaaacagatc acacagagaa aatgaagtta 21720
tcactgacat tttcaaggaa atgagagcca tggaaaaaca aggactagat ggctagacac 21780
caaagaaagg gctggtgatg tagcccagcc agtaaaggta ccaggtgcta aacctgccaa 21840
cacgggttca gtcccagggc tcatagcaag agcagccaac tgtggttgct atgtaatgtc 21900
cataaggcgt ctttggagtg ttcaaagtat ctaagctccc atgaaggcca tccagctggc 21960
tgcttggcta atatccttaa acatccaagg ttccagagaa ggatatagtt acagttaaat 22020
ccccctggct cacaacatct taacttattt gaaaaaaaaa atatctgagc atggcagctc 22080
acacctgaaa tctcagcatt tgggagcctg aggcaggagg gttgccatgc attggaggcc 22140
aatctgggtt acacagtaaa tactaatcag actacgtaca agactatgta gatatactat 22200
gtagcaagac tgtcagaaag gaaaaataaa cattaaagag gtaattagag taaacgccca 22260
ccattaactg taatggtatt taatagtgtt caaccctcaa ccaaatgtcc ctgggaggag 22320
ttggattatt ttatgtctca tacacctaaa cagtagcatc agtgcgctca ggattgagga 22380
gcaggccagc accaccaggg gtgagaggca tccgatctag aagatccctg cctgaggtag 22440
ccggtaagtg aagtggctca gagaaagtca agtcacggac agactccaag attagactga 22500
cactaagtgc actgaaaaca accctatctg acagtaagga acgtattggg tatgagtggg 22560
gaagcaagta caagaaagaa aagcctttcc ctggtctttc acctggcaca tctggcaaca 22620
gcagtacatc ctaagataaa cactgagtga gaatctacaa actgctctgg ggccatattg 22680
agaggatgag gagatgggac acatgagtag ccagttcact cttcagtgga aggttctggg 22740
gagctaaagg tggctgcaga ttcattgcct acccaccacc accacacacc ctgttcttgt 22800
ccttcctctt gaatcagagc agagtcttca gctgctgagc tcagatacag cggaagtgat 22860
gttgcactgt ctccggccat gctgagagtg ccacagcaga gctgtgagaa agtttgggct 22920
ccctcgtact ccagctcaga ggcatcttag agatgcatgc ccaaccccca cagaaccacc 22980
cagtggtggc cttgtggagg aaacacaaag tctccagaag acccccttcca aattacacat 23040
ttctatcagc tttaaaaaaa aatgttggtt gttcagggat agttcatgac ataatattag 23100
cagaaaatgt cagtaaatac agctgaaaac tggaaatgaa gggctggaga gatggctcag 23160
cagttaagag cactgactgc acttctgaag gtcctgagtt caaatctcag caaccacatg 23220
gtggcttcac aaccatctgt aatgagatct gatgccctct tctggtgtgt ctgaagacag 23280
ctagtgttct tacatataat aataaataaa tctttgggcc agagtgagtg gggccagagc 23340
aagtggggct ggagtgagca gaggtcctga gttcaattcc catcaaccac atgatggccc 23400
acaccatctg ttcagctaca gtctactcat atacataaaa taaatcttaa taaaaaactg 23460
aaaaagaaga aatggttgtt ttcatttgtc tgttattctg agaggtgtgg tttttacaaa 23520
tagtggtaac tataaaaaat ttaaaaccca tgcagattgg gggtggacta gggaaatggc 23580
tcagtaaatc aagtgctttc cacacacagg agatgcactg gagctctgat cctctgaact 23640
cctacacaag caggcggccc tggcagctgc ctgacatccc cgcactcaga ggccctggtg 23700
aactgactag ctagactagc gggacccgtg agctctgggc tcagacagag atcctgacta 23760
tagaaagtag aaatcaacca gggaaggggt ctgccttcaa ctttgggatg ccacattcaa 23820
ccacatgctc atgcacacac acgcacgcac gcgcgcgcgc gcacgcgcac acacacacac 23880
acacacacac acactaaata ccaagagggg acgtggttgc ctccaagatg gaaaatgcat 23940
ctaggagcat gaagtgctct cccattttgt tttaataaac ctgccagatc catttgacac 24000
tttacatctg tgtataattt caatttaaaa aactaaaagt agggggggaag gctgtttata 24060
tttagccaga atggatccac aattggtcta aaagctttcc tgtacattca gcaaggagtg 24120
tattaaacaa tccattattc tagtaactaa gataaaatcc ctgctgacag gcaccctggt 24180
attcccagac cattaaaatg cttccataaa gtctgcttaa agacacaggt agcaggccag 24240
gtggtgacac atcctggctg cctcagcaga ccttgcaggt ctaggtgtgg agcccagagt 24300
gtggggcagc cctggggcaa cacaggcaga cctctggagg cctgcggagg tggcatggca 24360
gacgacactg taggcagctt gcagaagagc tggccagggg ccttaaagga catcagctaa 24420
aggcctctgt ggaccgaaag cacaggcttg agggattatt tggagtcggg gttgggatga 24480
aaggaattga cacagattaa agaatcaact ccactctggt gggtgccaga acaaaggtga 24540
tgctttgtat aacgatgaag aaagttctag aactaggggg cagctccatg atagaacacc 24600
tgcttagcag gtaaaaagag tcaggttcag tctttggcac aacccccttа agaaggaagg 24660
ttctagagaa aggggtgttc tggacctgag aaaattagct tgaatttgca tataagtaaa 24720
ttatgtttat aagttgaaac tcttaccgtg gccctggaga gtggctcact cagttagtta 24780
gctgctcttc cagaagactc aggtttgagt ccagtgactc acagctatcc ataactccag 24840
tcccacagag atctgataac ctctggcctc ctcaggcacg caccaggcac acatgtgata 24900
cacagacata catacaggca taccatgaaa ataaatttta aagaattaac tgtaaccagg 24960

tctgttagca catccctgta atcccagctg ctcaaagggc tgaggcagta ggagagcaag 25020
ttcaagtctg gctttggcta cagagcctgt gagttaaagc ccaggcaact tagcaagacc 25080
cagtctcaaa acagaaatta taggcaggag gtacctggag ccatagctga ggatgggtac 25140
tggccaggcc tgtgtgagtt ccccaagttc tattctcatt cctgaaaaaa aaaaaacaac 25200
aaaaaaaaaa acataagtgg tcagttaaac cttaggataa gataatctct ttgaacctgc 25260
tctgcctttt tgtgagcttt tatgattatc aagggtttct ttctctagta tataaagcca 25320
tcttaggggg taagatctat ttaagtcatt tattttactt aaaacggtca ttttactcaa 25380
gcaggttcat gaacttcact gtgttccaca gtgttcctaa attgtacagt tctggaaagc 25440
agttagccaa ataccaagaa aatgaatgca gaatagagtg aggaacaaag gcggcccttc 25500
agcatatttt accttaatag attttccagc taataagact gctgctggag ggagagtgtc 25560
ctcccggtgc tcctgacacc aagtcacaga agaaattacc gaatgcggca ctggacacct 25620
aggactttgc attcctccat gcccagagaa gcaggtatca ctcagaagga tgacaggggc 25680
tggggaggtg actcagcaga taaggcactt ccacaaaagc ctgatgacct gagttcaatc 25740
cccatcaccc actttttttt tttaaagaga ggaaggagag aactgactgc agttgccctc 25800
tgacttccat gtgctcccca aggcgagcaa cacaccacat catacacatc acaataatac 25860
atttttaaag gatgactttg agctacacct gccaactgtc cctgatgctg ccaccactac 25920
aactagacag aggaggtctt gcctggtggg taagtgaaca gtcaagggtg cccacggaga 25980
gccacttctg ccaggcccac tcctgaactc ctaggtcctc acgggctcag accctcttgc 26040
ctccgctgaa gctgcagaag ggactcagct gtgcactgtc tcctccccca gggaccatgg 26100
ggcgtggtga gggaaagggg actgtctctt gccttggtgg tagatcagtc tccttcctgt 26160
tctcacacca gagcccaggg attgactcag gtgatgagag agtggagaaa ggatctacac 26220
ccagcccccc tctaagaccc catagcagcc ccaggacata agtacagaag agctgggctg 26280
ggctatgcat ttgctttata catttgagtc aggaaggtgg gcttatggta cacagctgag 26340
caaggaggca gatttagctc atctttataa gaggtctctg taggggagca gtcttaggct 26400
gcagttatcc cagaggagga agctgatagc ttctacatgg actgttaaaa tttgcattca 26460
gaccagggaa aggctttgcc acccctctga gcttcactgg ggaaggcttc gccactccat 26520
gggcctgatg cgttggaatc catgacagct cagcccatgt caacaacaca cattcactta 26580
gggtttcatc tgctcctttc atgtaacaca aggctgcttc tgctacgtgt ggggatttgg 26640
agagtatatt tcttgctgga aatgaatgat caaagcaagg ccccacctcc taggctctat 26700
caggatagaa gggtcactac cagaatgagc cacctcctca ctgacggttg gctccacttg 26760
caggccttcc aggattccaa gacttggttc tttgttctga agctcagggt atagcttcct 26820
ctacctccac acacagcccc taacccttca gtgcatagtg aaccactaag atctcccact 26880
atgtccccat agcagccctg gagtacaggt cctgtctctt gcccattctc aggtgagaga 26940
acctaggctc agagagatga cacttcagaa gataatcaga aaatggtgga ggtgattggg 27000
agctcagatc caaaatgcac tgcatttctt tattagatat ttttaattct aacggtgtac 27060
ctgggtgttt gggctgcatg tgtgtctgtg catatcaccg ctgtgcctgc tgcccacaga 27120
agccagaaga gggtgttgga tttctttctt tcaattagta cttctcaaaa ttcaactatt 27180
catgcatcac tttaatgatt ttttttttt tgccatagcc acataatggc ctgtggtcat 27240
atttatttaa tgtttttcat taaacaagct taggcctttc cttgaaataa ttagaaagga 27300
aaacttacag ttaccaaaaa atagagggcc agctgggggt ttagcaagag ttggtacagt 27360
gttcacctcg tatgcacaaa gccctggctt ccacccccag tacccagagc ttgggagagg 27420
aaaggcagga tcaagagttc aaggacatgg ccaggcatgg tggggcatgc ctttaatccc 27480
agaggcagac agatctatgt gagtttgcat tcatcctggt ctgcaaagtg agtcttggac 27540
agccagggct ctgttacata gagaaaccct gtatcgaaaa ataaaaaaac aaacaaacaa 27600
caacagcaaa agagcttaag gtcatctctg gctgtatagc aagtttgagc ccggctgggc 27660
tatacaagac catcttaaga gggaggagga aggggaagaa aaagaggaaa caagaaagga 27720
gataaaagaa ggtgggggga gtaaccagaa cgcattatat aaatgcatga aattgtcaaa 27780
gaactaagtt aattaaaaag caggaagacc accatcacca gcctcgagta gaaggcagct 27840
gtgtattcta agcctgcaaa tagcagtgtg agtctttgct ccggggctct gcttcaaaag 27900
agatggtaaa gttagtacaa tgttagagaa tttcaggaac caactgcgat cctttcctcg 27960
atatcatcaa aggggtggag agagagacca acaacgctcc atagcacagg cccatcactc 28020
atgtgcctga gaagctggag ccaaggatct gtctcttcaa gactccatct caataatggt 28080
tcagtgacat tttatgccca ttggtgatag ctaaactagc cccatttcac ctaaaagccc 28140
acacctggca ccgtagtttg tcctgtcttg caaaaaatgc cggtcaagat ggagataaga 28200
accgtggcag gaacagatgc atctgatctc agtcacactg ccaacctatt ccttcctcct 28260
gaggcagctc atgctgagga gtgctggcta gcaccagtgg tacacagctg aagaccatga 28320
ctcgccttct cccagaattc ccagcaagag gcattgagcc caataagtcc cccctccagc 28380
catgactaat ttttgacagt gtccatcttc tgatagccct tgaaggtaac tacagcttct 28440
gtgagtttat gattgtgatg actgtggcat tgtcaaagga tggcatttgc aagtcctctc 28500
tgccttctgg cttgcatttt ctcttcttcc tcccccacct tgttccccaa gccttaggag 28560
agtggcatct gtgtcttgtt cagagctgag cactcagcca ccatttcttc tcagtgcctg 28620
ggcctcacat gcagtccttg ggcagtggtt ggttggtcca gtaacaaata ggcatgtctt 28680
gcctagcagg tcttatctag ctctggtggg tttccaagca tgtagcaaga agagtctgca 28740

ctgttttggg agtctctgga gcatccctga ccaatgactg acatggaagt gctccaaacc 28800
tcctgcttct ggggtttctg tttagtaacc cacagcctct aggaacagtg ttatccagac 28860
atgtagggta tctctcttct aatgtgtgcg tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg 28920
tataattgtg ctacaatata gtaagtttac acacttgttt tggttaacca cccccacccc 28980
atcccgtctc cccacttctt tctctaatta aatctttcca ctccaaagag cattactgct 29040
attgcagaga acatgggttt gcttcccaga acccacttgg cagcttacag ccatagtaac 29100
tacagttctg gggagtccag tacccccttc tggcccctgc ctgcaccaga tacacacaca 29160
cacacacaca cacacacaca cacacacaca catatcatac acttagatac ctgcaggcaa 29220
gacatttgta catataaact aaaaactaaa tcttaaacaa aaaaaaaatt tccactcaaa 29280
gtcttcaccc tctctgtttt cactttatct gtgtcttgct atcccttctc ccttaaaggg 29340
aagaaggaca gagggaggag ggagggagga ggaagggaga gagggagaga gagaaagaga 29400
gagacagact cctagtttcc tggcttccac aagtgctcca aggtaagcat gcataactaa 29460
agaatcaaag ctaagtaagg gctggagaga tggttcagtg gttaagagca atgactgctc 29520
ttccaaaggt cctgagttca gttcccacat ggtggctcac aaccatctgt actgagatct 29580
ggtgccctct tctggcctcc aggtatacat gcaggagaaa tgctgtatac atgataaata 29640
aatatttaca aaaaaagaat caaagctaag agccatatgt aaggatgtaa cagcatcttt 29700
ctgggcctga gcaacactat atatattttt ccagttccat atgtttacct atgaataaaa 29760
ttcataagta tatatgcttt gttaaaaata acaaaacatt tcaggatagc cagggctacc 29820
cagagaaact gtctttaaat aaataaaaca aaacaaaaca aaacaaaaca gataccaaat 29880
ccacaagcag tccaatcaat actgaaacgc tggttttgca agctaccggg gttttaatca 29940
tcttaacgtt tctttctctt tccatctttc cacttctttc ctgcccttct tcagcttgag 30000
ctttcctcgc cactgacgtc agccttgtcc tcctcacatc tctcttccca ctgcaggcct 30060
catcctcgaa ccttcctctc acccttctca ggctcctctc ccctcaccat atcacccaca 30120
gcatcaccct tctgcagccc agtcaggacc ttcctggtcc tctaaagtca gctgggggag 30180
gggcttgcag gcctcaggtt agtcctagtt aaacagagct agccttttca gacaactgat 30240
ctccttcaaa agacccaact actgccttcc gtttccccgt aagttcagat gttaacctgt 30300
ccagaccttc aaaagtccta ctgcctctga gcttgagctt tttcagtgtg ggtaatgggg 30360
aattttggaa ctgaaattaa gtctacactt aacaaaggaa ggaactcttc atctacaaat 30420
tcagccacca gccagccttt ccggtttcca tcatttcatt tggatcatct agaccaagtt 30480
ctggaataat tgcttaggtc ttcccccacc cccacccccа ccccacccct ggcctggtag 30540
atccccctct ccacatccct gttttccttg ttacttctct tcagatttag ttttccgtga 30600
ggcaagagtg gagaagggag agatgtacta gcctgtgctc ctgtgtcaca ctcttgctac 30660
tcagttccac tcttaaaatt tctggtccca gaggaataga gatgacctca catgcaaccc 30720
tgccttgact acttttctat tgctctaagg aggcaacatg gccacagcaa cttgtaaaag 30780
catttaattt ggggttgaca gtttctcaga ggttgaatcc atgaccatca tggtgggagc 30840
atacccggag gcaggcatgg tggacaggca gtcgtgggat ggctctggag ctgttgcaga 30900
gcacttattt gctgattgaa agctcaaagc ctacccccag tgacacacct cctccaacag 30960
ggccacaccc cctaatcctt ctcaaacagt tccaccaagt attcaaatat atgagcctat 31020
aggggccatt ctcattcaaa ccccacccccc acccccgtgg ccctactaag ggcatcagat 31080
agggcctatg gaaaagttat aaaccctctc accaccactc tgggttccag caacccaagg 31140
ccaccatttt ctactcttgc ttaaccaaca ccacccagga tctctcagcc tcagcctgga 31200
atgagggaac cctcttgtct cttttcattc aactccgtat tcttccttca ttccacccat 31260
ggatggaaag attcaccccc tccactgtag agtaacacac acgtatgaca agccacttca 31320
ctgccctgca tcttacttct gctctgaagt tctgtcagcc aaaacgtatt gagcactgaa 31380
gactgtcagt tgctgctttg tgtggtggtt acaagttaag gtccgactgt agctgtctgc 31440
ttgctggaga gactgggaac cagtagttgc ttagcccatg gggctggaga cctcagcagt 31500
tccagtgtgg ttctgaggag aacccattcc agcagcagca gaggtagcca caggatagct 31560
tgactcacaa gactcatgaa ctcaagaaga ggagagatga acttgtaagc agggtatgtg 31620
agctcacacc tgagcggtga aggcaagcag gtaagaagag cttcccctcg gaccttctgt 31680
ctgggccatc tacactcaga tgggcctccc acttcattta ctagaagcaa gcaaatccct 31740
ctcaggcgtg ctgaggttaa cctaatcggc ataacgcctc ataggtgtac ccagagcttg 31800
tcccgtgata ctagatcctg tcaggttgaa aatgttaacc atctcaaggg tcgtacacat 31860
tccaaaaagg cactgtgttg gctattcttg gttgtcaact tgactacatc tggaattaac 31920
taaaacccaa gtgactgagt atgcctggga gggagatttt cttaagtcat ttgaagtggg 31980
aagacccact tttaatccag aacttctaag gtgggcagat tcacctttaa tcagcctatt 32040
tcaatgacat ggaggatgga agtttgttct ctttgcctgc tagcccttgt tggcaagtcc 32100
atcacttcac tgaaccaaag cctgtaaggc attcttcctt tgtttgttgg gacagggttt 32160
cctgtagccc tggctatcct ggtattcagt ctgtaaacca ggctggcctt gaactcagag 32220
atccaagtgt ctctgcttcc caagtgctgg gatcaaaggt ctgaaccact aataaattgt 32280
gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt acacatatat atgagaggga 32340
gtgagagaga gagtcattct gtaaattctg ttcctctgag aaccctgact aataaagctg 32400
cagactgctt agtatccttt ttgttctctt tggggacaca cacaaatgag tgaacggact 32460
acagtgggca acattcttct atgtctggtg gctgccctgg ggctgtttag tccacccttg 32520

tgtgaggact cttttgctct caagtgctgg catctgacct gtgccctttt aaatctgttg 32580
ctaattttgt ctctggggtt ccaagtagag acttttcagt gatctttcct catgatgaaa 32640
atgggtgatc tgttattgga agtccttggc ctaagcaagc tctgatttaa tctaactata 32700
tcatgtgctc ttctaatcta ttgctccggg tccctgagca ttgctgtact cattcatggg 32760
tcattttgtc attaatctgg ctcaatccat gttcacaatg atgatttgat aaaggctgaa 32820
aatgtgaagt ggatggtaac agttctgtgc cctggattcc aacaaagaga tgcatgctcc 32880
tccagcccac tctgggtgac tctaggggac ggagacaagg gtcttacaga gatgtcagag 32940
tatctgactc cttgacagct agtggcctca cagggagact catcaggggt caatgctctt 33000
tctggtaaga tgaactccag ctcaccctgc atcttgatct gtccacactg cttggtgttg 33060
agacttcctg tagccatgta aagtgggaca tctggcctac tggtgattct ctaagaagga 33120
atttccacca agcaggacac ctgaacactt tcttaacatt gactcttact ttggctacca 33180
aaagaagcct ttgagcccta tgtggtagca cagacctgca atcccagtac tcaggaggta 33240
gatgaggtgg atctggagtt ctaggtcatc cttggttgca tagcaagttt atatttgagc 33300
ttggccttgg ctgcatgaaa cccttgtctt ccaggagaca aaaacaaaaa caggcaaatt 33360
tcccttaaga agctcacact ccgcctatcc actgtgcttg ccttcttccc aatcactatg 33420
gcctcctctc ctccattaac gcccatgctt aaagggtctt ctaaaaatgt cttttagtaa 33480
actccaattc tactacattt aaagaagggg gaaggtgagc cccacatgct acaccccaca 33540
gttccagggt gctaggcttc cggctggggg ctgcctcttg gtactgcctt gccctggaat 33600
gtcagttcag ctaaaggcct cacacaaaag atgaaagccc tgagtcctct tactgcttct 33660
tagcacacaa gcagtttcct tcactcccct aggtcttagc aggccttcat cttcaagggt 33720
tctctttccc tctattctgc cttctctgtc tctctctctc tctctctctc tctccctccc 33780
tccctccctc cctcccttcc tccctctctc tctccctctc tctccctccc tctctctctc 33840
tctctctccc tcccttcctc cctccctccc tcccttcctt tctttccttt cattttcttt 33900
ccctttttgt cccttcatga gaaaaagcat atttgtaaat cccaatttaa aatataaata 33960
aacgaaaaca gtaagtctca accaaatgag gcctaaatca gccctggaag attagtacct 34020
gtttctactc aagttaataa tttactctgt gtccctctgt gcatgcttgg cttcaacaga 34080
ggatctttaa catgggatgc aacttcgcca gagagcttca gttctcagga ggcatgtgga 34140
catcgtggag gttgaggagg ggcagatgga tgctgggaag caaatggaaa gcctgaggtt 34200
ccaagtcaaa tctgtgactc acgcagtaag gaggtttgag ctggggctgc ccaagggagg 34260
agggctacta caggcaatga ttaagattta tgtatttatt ttatgtatga gtacactgtc 34320
gttgtatagg tggttgtgag ccttcatgtg gttgttggga attgaattta ggacctcggc 34380
tcactctgat caaccccgct cgttccagcc caaagattta tttattatta tacataagta 34440
cactgtagct gacttcagac acaccagaag agggcatcag atctcattac gggtggttat 34500
gaaccacctt gtggctgctg ggatttgaac tcaggacctt ctgaagagaa gtccgtgctc 34560
ttacccactg agccatctca ccacccccct aaattgttat ttttaaaact atatgaaata 34620
aactttacca tctaaatggg gaggggtgac cagtctccgc acataggagg tataagggca 34680
ggaagatcag atcttaaagg tcagcctaca tgagaccctg tctcataaaa accaagtaat 34740
taataatagc aattaataat taataataat aggacagcag tagcactatt tggttgctgg 34800
ggatacagct ctagtagaac acttagccaa agggtcctaa attcaatgtt gaggacagcc 34860
aaaaataaaa taaaaagttc catgttgttc ccccacacac actttttttt ttttttgaat 34920
gactctcact atgtagccct gcctggtctg caatgtacta tgtagcctag gctagcctca 34980
tactcaaaag agggctagcc tgccactacc tctgcctcta gagtactaga attatcagca 35040
tgctcaggca cactgggtct tgtttgtttt tttgagacaa gatctcatga atcccccact 35100
ggcctcagat tctccatgta gtcaacgata atcttgaatt tatactggaa aatggtagca 35160
atctggagag taacaagaca ggagctgact gtgtgtatgt agcccaggat gaccttgaag 35220
cctgccttgg cctacagagc gctgggacta taggggtatc ccactgtgct tgcctgcctc 35280
tatgtaaagg tggaacgaat ttcccctgtg cctgtggacc acgtttctct gacccactca 35340
tccaccagtg ggcgtttggc ttgaccccac atctcttggc cactggggat gatctgaacc 35400
cagtgcattc ttctcaaaat acactgaggt gggatcattg gatcacagac gttcttagag 35460
cctagcctac cccctggggc tacaggaagc tcacagtttc tgttggttga ttggttggtt 35520
tgcccctccc caaacccctg ccacctcccc ccaacctggg tttctctctg tggctctctt 35580
gatgtcttca aactcactct gtaaaccagg ctgaccctga cctcagagct ctgcctgtct 35640
ctgcctccct agtgttggga ttaaagacat gtaccatcgg ctatacctac agacgtgctc 35700
aaggtatgta cagagcactc accctggcat cccttcacct gcctaagaga ctaaggatca 35760
gaagtaaacc ctacctgctt ctctggaaga ttcaggtttt cctcagggta ctgcagcctc 35820
tcaacctagc atggtctggg ccttatcctt acgaatgtac actcaaacac aaagacaagg 35880
ctctcccagc ctgccctaat aacttttttc accaaacagg tcatgagtca atggtgcccc 35940
gatattgtct aggcaatagt cattctggga ctacaggcct tggtacccaa catgactccc 36000
tcaaagccaa gattgtgagc atgtcactga ggccactctg tgagcttgtt tccatgtcaa 36060
cggagctcat gatgtcagaa ggctgaatcc agaccctgca cccaggctgt gtgtttccag 36120
ctccacccca gagcatatcc cagtccagct ggctctttgg aaccattaaa gagtgatagg 36180
tgctgactat gtgtgcagag agtgatccta gcagcacagg acacaaatcc tcaccctggg 36240
gaaagcagcc ttcaacctct cacccttaag gggaagggca accatggaac agcatctgtc 36300

agccctccct cacaaccccc caggctggcc tagccacacc ctgccacttc tatccaggca 36360
gcagggcttc ctttccagag cagggggggt ggggtcaggg aggagcctgg ggattaggga 36420
gggacactga gttcttcaag caagaactgt tccccatcta aggccatccc ctcctccagc 36480
cccagctatg cagggagcct ggctgctgct gctgctgggc ctcaggcttc agctgtcctt 36540
tggtgtcatt ccaggtaagg aggctcccct aactgcttgt ccccactcac aagcacagcc 36600
ttccactgac acctgcctcc ggtctccccc ttggccagtg gaggagaaga actcggcctt 36660
ctggaatcaa aaggcgaaga aggccctgga tgttgccaaa aagctgcagc ccattcagac 36720
atcagccagg aacctcatca tcttcctggg agacagtgag tgtgtgagca cggcctggcc 36780
accctggggc cccctgagct ccaggcatcc attgatgtgt ccaggaaagc ctggtgttca 36840
gatcgaacca gattctgttt ttgtagggtt gggggtgccc acggtgacag ccaccaggat 36900
c 36901

<210> 7
<211> 13330
<212> DNA
<213> Homo sapiens

<400> 7
gatccaccgc gccttccccg agcaggccct gctgcgccgg caccccccgc cccaaacaag 60
gatgctcagt gacctggtgg aattctgcga ccagatgggg ctgcccgtgg acttcagctc 120
cgcaggagcc ctcaatgtga gtggtgggca ggattcgggg gaggccctgc ttgggggaaa 180
gaagagaaag acctggaagg tggggtggtc cagcggcctc tgcttccccc cagagtccct 240
ccccttcagc caggtctctc ctgtagggaa ggaggccctg ggagaaaggg cccctctgag 300
tcacaggggc cctgacagtg ggacctgccc cttcaccagg actgtgccaa gcggggggac 360
cctggaggcc tagcagaggg caggggtcct gtggccagaa agggctggtc ttgggcccag 420
aggctttcag agtcggggct ggaattgtag gaatcccggg aatgttcctg gtgggtactt 480
tcaggtgctc cctgcctggg gcaaagctaa gaaacccagg gccttggctg tggtcctgga 540
ggagggagac atctcaccca ggcccaaccc tgggagggga aggcaggtgc cccaggccag 600
agagctggag cccagtgagt ccaggccagc cagcaaaaac atggaagtgt gggccacagg 660
gtgtgggcgg ctgccccctc tccccaccca tcccctctga gcagggctga gccccacagg 720
caactcctcc ccccagagcc gggcatgagg tgctcagcgg atgacagggc ccagagtctc 780
tgcccgagct ggaccacacg tcacataggt ttctgggatt tgcttctaga aaagcctgac 840
ccaaacattt ggagatgaca agtactcact ggcccgcaag gaggtgctca ccaacatgtg 900
ctcccggccc atgcaggtaa ggagggccca gccccggcct cccctgctcc caggagcaca 960
ctagccccag acctgtgacc tccacgtgca agcacaggcc cccaccgttc ctgcctgctc 1020
tggacatggc tgggtggacg ggggctgctc ctcctctgcc agagggtggg agaggaggcc 1080
gaccccaggc agcacctagg agggggcacc ctgagcctct tgagtttgag ccgctgtctc 1140
ctgctcacac tcgctcaagg acagagtgcc ctggagctga ggggctactg agacctcctg 1200
tcaggctggg gtcctggagg agagacaggg tcccatgtgg tttcctgtcc cagggaacac 1260
tccgcagcct ccatccccac atgtggagtc cagaactagc tgtcagcctc tggccagtgt 1320
gggaaagaag cggacttggc cgggggccta ggcctgggcc tgcagggagg tggcagcctg 1380
tggggtggac agctgggctt gctctgggat gcctgtcaca gcgccccagg ctgagcttcc 1440
cccatgcagg gcccgagcat cctgggacca ggaccccaga ggaccctcgg gtcagcggga 1500
gcagtggatg ctgatgggtc ggctctgggt cccaccccgg cccaggggca gagacaggct 1560
gtattttagg ggctcggtca ctcggcagat tcaatctgtt cacaagaact gatggcttca 1620
gctgacctca gtggatttat tttctgacac ttcaagctct gctgggtttg aagccatcag 1680
ggcctgcttg ggcctggtca ccgtgacctg cccccagtca caagtgtctg cccagccaag 1740
cacctgtggc acccacagcg gagaggggct gggccgtgcc cactgggctc tctctgttct 1800
acactgcagc ggctctaggc ctggcagaga aggcacagca gcccctgagt cccagaactg 1860
cctctggctc tgccctgctg gggcccctcc catgtccctg cctctgacgc catcacctcc 1920
aaggaggtac aagccaagct ggagctccag agatcggagc cgctccggag ttagccagag 1980
cccgaaaagc ctgcattctc ctggctcgcc tcccagggag ctcagaggtg cccttgcccg 2040
ggaatccgat ggcagagagt taccaggtct gcggtgctcc tgttcctcag ccccgggaac 2100
tggggtgggg acagggcagg gcagcagcag agagcacaga aaggtgtgag ggggcacaca 2160
gtccccagtg agcatctgca tcaggacacc agggctgtcc gagggctgtc ccagggatgg 2220
ctgggcctgt gggaaagcca tggtccccac ccatcccacc cgaccctgag ccacctccac 2280
cagccaagag gggccagggc ccttcatcaa cctcacccag gtcatctggg gaactgggcc 2340
accactgaga acaaagccca gacatgtctg ggagtggagg ctgtgcccac ctcccccaga 2400
gacttgcccc cgacttaacc cagggcccag caggggctgg aagggaagtg gagttaggga 2460
gcggagcagg tcaccatcag ctgcgccctg gattccaggg cccgtgtgca cagagtaacg 2520
ggagccggct gtctgtctgg ccaagggcac aggagggtga gtgtgtacag cagccaggga 2580
gcaagggagc cagagagaca tacaggcgtg accttggacc tctgcgagga acccgttcac 2640

tcgctcccag gcagtagcac tggccctgac acccagccct gaaagctcgg ggactgcagg 2700
acaaacagct tcaggggctg tggccccagc tgggacgggc tatgcgctgg tccctagaga 2760
ctctcggtat ctccccctgc cccagtcctg cctcctgccc agcacaaggg cctttggaac 2820
tcagccctct gtgtctcagc ccccgggagg gtcaggtgtc agagacgaga agggccgagg 2880
ctggcaggcc ggaaactgcc tcccttgact gctgtggggt ggagtattgg cgagcacaga 2940
ggtgcccggg tgaagcgtgg cttcagctgg gcgggatcag tgccagaggg gatgaggacg 3000
gccccgacca aaggtgggcc taggctggag aggaagctcc aagagcctga ggcccgtatt 3060
gcacagggca ggggatcgca tcctgggctt tctctccctc ctcccactct ggccagatgg 3120
gaggatggac gttgcctcct tgaacaaaga cccacaggct ccttggcttc tgcttgtgtc 3180
tccagcagac agcgtctgca gcccctggtc caacaaaacc gcaggcggcc tcctcctctt 3240
cctcctcctc attgtcctcc tcgaccacca ccacctcctc cttccaccac ctcctccttc 3300
tcctcctccg ctgtcgcctc ctcctcgtcc tcctcctcct cctcctcgtc agcagtcgca 3360
gcctcctcgt cctcctcctc ctcatccgca gtcgcctcct cctcctcctc tgcctccacc 3420
tctgccatcg ccacgtcctc ctcctcctcc cccacccccc gccgctacct ttctttcttc 3480
ttccttcttc ctgggcgaga gtagcagccc cggccccatg ctggggaagg gtaggccaga 3540
gactcttccc tcctggtggt gctcagcagt gactcagcag ggactggact tcggaggctc 3600
agctcgtgcc ccctaccctg acagcatcct gggggttcct ggctccctgg tcctcagcag 3660
ggtgggcttg tccaggccat tctcagtgct gccaccttga gggcatctgg gaggcccagg 3720
caggccagat ttgtctcctg gaaaggacat gggtaccccc gggctctgcc cagcctcctg 3780
gcctcccccc ggggccccct gtgcagcaag ggccctggcc ccagtcctcc ctggcgtcac 3840
tcagcaacca gcagcccatt aggtctgtcc acacatcgct gccgacggtg aggctgtggg 3900
tggtgccagc cttccaggcc tggctgggca gctctgggct tgtcaggctc tgacccatcc 3960
cgtcccgcag atggcactgt acttctgctc ggggctgctg caggacccag cgcagttccg 4020
gcactacgcg ctcaatgtgc ccctgtacac acacttcacc tcgcccatcc gccgctttgc 4080
cgacgtcctg gtgcaccgcc tcctggctgc cgcgttaggt gaggggtgca gtcggggtca 4140
gggcagacct gggccagctc agggctgccc acccccacag tgggtgctca gtggcccaag 4200
accattctgc cgtgacagcg gaggtccaag ggtcgggcga cccaagtgca ggggagcctg 4260
gcctggaaac tctccctacg ggccggtgct gcagaagctg catggagccc acagccagcc 4320
ctggacacag ccgggaggag ggcgctgacc tcgaagggcc gctttctgct gccctgggag 4380
ctgggtgctt ggggtcctaa tctgtcggcg ggggtgcagc gccatgcagc ccatccccca 4440
gccatagctc ttcccagccc cccaggctcc cactctcatg cctcaccccc tcttcccagg 4500
ctatagggag cgactagaca tggcgcccga taccctgcag aaacaggcgg accactgtaa 4560
cgaccgccgc atggcgtcca agcgcgtgca ggagctcagt accagtctct tctttgctgt 4620
tctggtcaag gtgagccctc cagcctggtg cccctcacct ccctctggct cccgaccctc 4680
ctgggcacct gctcaccagg aggcctcgag gagcccaggg cagtgccagg aggtgccatg 4740
gctgcagcac tgtccctgca ggagagtggc cccctggagt cagaagccat ggtgatgggc 4800
atcctgaagc aagccttcga cgtgctggtg ctgcgctacg gcgtgcagaa gcgcatctac 4860
tgcaacgtga gtgccctggg agagcccggg ggcgggcagg gcagcccaag ccatcccgca 4920
ctggaggggc acaggctgtg atgggtcaca ctccaccccc cgctccccca gccctagcac 4980
aaagcccacc tgatgggcct tgctgagacg cccagctctc ccacctggga tggtggctcc 5040
aggcccaggg tcaggcctgg ccccttccc caaggaccca ggaaccagag agcaggcccc 5100
tccatggcca gtacagctcg gcagggtgtg caggctttgg ggactgtgtt tataggaacg 5160
tgaaggaatg aaaggccagc gaatggtccg tggccgcttt ggaaactgtg tcccctgaag 5220
acaaggaaga gagctgtccc tggctcggct cctgccctga gtgactgttg actcacagtt 5280
ctctctccaa ggggacatgg gcctgtccta atgctgcctt aggggcttgg ctccagctgg 5340
ccctggggtc tgcaggtcac cacctgcctc tgtgcctggc tttgaatttc ctaacatcca 5400
gagtgccctg ggagtacagt gtccagcccg ttgtgtgcag taaacgtggt gttcataacc 5460
gggagctggg cagaagagga acgacagagt ccccctgcgg accctggggg ctctgtatcc 5520
tgaagttcaa gcctagctca ccctgctgtg ggcccagccc tgcctgcact gacagatggc 5580
accagcaggg ggcgcagcgc tccgccgcca cagttctctg tccccacctc agtgcagtca 5640
gccctggacc ccccaccact tgcccccccat agcacacaga gccacgggcc ttcccagccc 5700
ccacccctgg cccttggtca ctctcacctg ctgcctcagc tgaaggtggc ctggcagggc 5760
ctccctgaag ctccctccag ccaggcaagg gtgggccagg gccgagggct gagggccgcc 5820
tccaagcatt gaagccctcc agggtggaag ggcaggcagc agcatccaga gctgaggcct 5880
gaggcttggt gtttgcactc caggcactgg ccctgcggtc ccaccacttc cagaaggtgg 5940
gcaagaagcc ggaactcacg ctggtctggg agcctgagga catggagcag gagccagcac 6000
agcaggtcag aacccctctg tgtcccagcc ccctaagtcc tgatgacccc tctcctgcct 6060
cctgcggtgc ccctcattcc ttcatctgtg tcccctgggc tcccccagca ctgcagcctc 6120
ccgggtgggg ttttagggcc ctcccagctc acccagaccc cctcctgtgg gtcctgcttt 6180
ctggcaccac cttcccttcc ttgggggcaa ccacagtgga gagaggaggg gctctgcctg 6240
tcccgctaat gcaggggtgc tggccttcta gggtccttta gagaacctga tgaaagctat 6300
gagtttacac ccaagaaatt gtctggaacc gttttcacca acagtgtgcc ctgaacgcgg 6360
acccaggccc tcaggttgtg tttcataagc cttgggagcg ctcaggatgc atctgactcc 6420

ccaactctgc cctgacccag ggcattcttc ctggaggggg cccccattac agacaggcga 6480
gcagaggctt ccagaggccg aaggaggggc caggggtcct gctgcaggga tggaggcaga 6540
gctgcgcctc gacatcaggc cctgccatcc ttgtcccctc acggctgggc tctgcacagg 6600
tcatcaccat cttcagcctg gtggaggtgg tcctgcaggc agagtccaca gccctcaagt 6660
acagcgccat cctgaagcgg ccaggcaccc agggccacct gggccctgag aaggaggagg 6720
aggagtctga cggtgagccc gaggactcaa gcaccagctg agctccacca gccgcctgcc 6780
ccgcctgccc cgcctgcctg tcccgccaca ctggctttag gacctgttga cacggagggg 6840
ggtttttaat ttggttttta acaactcagg ggtttgtttt tatttttatt taatttttgc 6900
agctcaactt ttaaacaaac tgcaggggag agggtggggc tggaaggaag gctgaggcct 6960
ggtcagcagt gaccccagca gagcaggccc cagtcctcct gggaggctgg ccccccttt 7020
ttctgggccc tactgccctc ctctgcccag gaaatggggg ggtttcagca actcagtgtc 7080
acagaataaa atcaagtgtg gagtgccatc tggtgtgtag ggcgcctctg ggaagcctgg 7140
gcagcagaat gccccttgca cccagggcaa gggacccagt tcaggcttca cccctcgctg 7200
ctgagccgat gtcaacacct ggaactttcc tgtcagttcc aacacgattc agagctggct 7260
gcctggcaga tgattgatac tggagtctca ttctgcctga ttaaaaatgg aattagtatg 7320
caacactgag agcgccccca tcaccctgac gaatgtgact gtgtctgacg aatgtgactg 7380
tgtccaaccc tgcccccact tcctctctgc accagctccg cagggcctgg tgggagtcat 7440
gggtcctgtg atacccctc ccctcagttc ctcaagcagc actctgtgag gtcctgtgcc 7500
cagctctggt gtgagtgggt gccccggcag caccaaggga gcctggacag aggagccggc 7560
ctgggcctgg gggaggggag gagggccctc cagtgccttc caaaccagga ggggaaactg 7620
gctgctggtg acacagcctg ggtgacacgg atcccacctg cctcagtccc gagcagagct 7680
ggctggccac tgggcagtcc cttccccagc cagcctgacc ccagcctgta ctccttcccc 7740
ctccgtgggg gaagctccgt ggcttggcgt ccccgagagc tgccagaaac taggatgaaa 7800
gccatggtga gcacggcctc tgttcccctg caccatttcc tggggtgtcc ggattaacaa 7860
gctcatttga tctggttaca gtgaattttc ttcaaagaaa cactcaatag ggtcccttgt 7920
cagagtgcct cgcagcgaca gtgactgggt actgctgcct ttgtcctgcc accgtcagac 7980
ggggctggct atgggaggca accaaagaca tcccgcacct gccctgggag cctttccctc 8040
ctccagggct cagccacctc aggcggcctt ccgtctgtgt gtcctgccac ccccgagatg 8100
tcccagaggc cacggtcacc ccatctgttc ctgtccccag aaccttctcc tggagccaag 8160
tatctgcagg gacagacagg cgagcgtctg ggggtttggt gttggggtgg agaaggctgt 8220
ggggtgctgc cccagcccag gcagcctgac tgtgagagcc ccaaacagga gagccccaaa 8280
caggaaggac cagggccctt cccctccct ccatgctgcc caccctctga ggagcagtgg 8340
ccaagttcct ctctgggctt ctcgggccag gctgaccctg tcccccaggg cctcccacga 8400
agcatgggag ctgttccctc acaggcagca cagacccgga cggacacctg tccctatgtc 8460
ccagcgcccc caggccccag tgaggagtag ccaggggggt gaacaagggg gttcctgctg 8520
cctgggcttg tttgggaagc agatgctggg ctcagagttt cttcagagag cctcaccttc 8580
cgtgctggcc ccagagcatg gcgggtccct ggagctgtgg aggccatggc agccccagcc 8640
caccccaccc catctgggga agtggaaacc gtatccacga gggtcaggtc aggtctctgc 8700
ctccagtgac ctggcaaggt tgtgcccagc caggacctgg gctcaggccc aggcagccgc 8760
cacaccctac ccagagctca gagaaggcag cccagccttc tccccacacc agtcacaccg 8820
agccccgcgt ctgcattcac tcctttaagg aacatggttg actgaatccg gtgccgcgca 8880
ttcacaggat ggctctccat gggtccactg gggcccagcc tcttatgtgg cccctcgcta 8940
aaaggactca acagaaagag tgaccaggca ccgaccctca tctaaaggag gacttggcca 9000
ttccctgggc tgtcccacag cacctgccgg ccagggcccg ggcacagagc gagactgtct 9060
tttcctcaag gagacaccgt gggggaggga gggagaggta gacaccacca acctcattcc 9120
atgaccaggg cctggcgatg ctcagaagcc agtgagtgtg tccctgccct gaagggtcag 9180
tgctggcccc ctggacctag ggggaagatg gtgcaggcag tggcccagcc tgaggaagga 9240
gctgaagctc tcaagagttt gcagccaccc tcctggggag agactgacgc ctccccagtt 9300
cctgttagga aggacctcag gaaagaactg gaattacaca gcctggggtg gcagcctcct 9360
ggtccctgag gaggatgtca ggccgcagaa gggaggaacg ggcatgaagc ttgggaagcg 9420
ggcgccagag gaggcgaggc ctctgcagaa gcagcaccag aggccactgc agcggctcca 9480
ccacccagca gcgccgccag gaggcaggaa gtgggaggcc aggcaggagg ggctgtgatt 9540
gcccaggtgc caggaggaag ggctgagagg ggacagtgca gatgtccaga gaggcctgac 9600
agggacaggc tgcgaaagtc acgggtgggg atgggcttcc gccagagttg tgtgtggcct 9660
gaggacagtg cagcaaggag gccccatggt gagcacatgc agccgaagtg acaggttggg 9720
ctcctttgtg ggacaagagc ctctccaggc cactgcaggg tgttcagaga acaaggccta 9780
caaggatctg ctgtgcctgc agctgggcag tagaacactg agcatgcagg gccggggtgg 9840
gaagcaggaa agccacatgg acgagagagc cgggcctgcc cagcagtgcc ttttgggagc 9900
gcaggcagga tgggatgtgc agctgtgacc tgcccggcat agaactccgt ctggctgggg 9960
agaggaggtc tcttctagcc agaatggacc aggaggtccc gggaggacct gggaggaagt 10020
ggattgagtt gggccttaga aggagagcca ggaacaggcc aggtcagggg agctggagcc 10080
tggctaggta tggagagagc agggtacact tgctgcaact gtgagaagag ccaggggtgg 10140
ccctggtggc ctgggcgcgt ttagctgtgc ctggggccag gcctgactgg ctgcaagtca 10200

```
ttactatagg cggaaagtgc agagtagcgc gctcctgctg tcactccctc ctccaagtcc 10260
acaaagaggc aagaaaggga ggattttaag gcctatccat accgcatggc aggtgagagc 10320
agaggagcaa acagcacttt tggatcctgg aaagcagaag gtgagtgtcc caggcgtagc 10380
tgacctgaga aaggcgactc caaagccagc agcagcaaca gctggaactg ccccagcctg 10440
caccacggga cccccagctc tgagactgag agcagctctg gggacctctg ggctggggtg 10500
aagagggatg gctggaatca ttgttgcaaa caattcagta ggcaggcagc tccctagatc 10560
ccaccgtggt ctgcagaggc cagcacctgt cccgacctct tactggtcgg ccctggagag 10620
ccatctccta cagaggcaaa atgaacggtc tctgggccag gaccaggcct gttcaggggg 10680
atgtgtggct aagtgcataa gggatgctga gactacagcc ctcgtgccca ggcagcgctc 10740
agggcatgga tagccaggcc ctccccatcc aggccagaga tgggaagact ccatccaatc 10800
tcattccatg accagggact ggcaaagctc tcagttctct ctccatccca gcaggagaca 10860
aagaacccaa cctcagagat tcctcaactc ggagacccag ccaggccacc ctccagagca 10920
tctcagtctg caagcccctt ggtgtgctca gagcttccag tcacactgct catgcctatc 10980
cgtgcacagc cagggattgc ccttcgtgga ggaaaacttc atgaaacaaa aaacaagctc 11040
cgtggggaac acagaccata gaggaaaaag aaagctgtag aaaaagaaat gatgaatgcc 11100
ttcctggagg tgagaaagcc atcgtgaaac gagaggaggt tgctccaaaa agttcctaga 11160
gagcaaaaca agggcccttg gaggcacaat gattgccacc gtggagacac atttcagcgc 11220
cactagagta aaaacactgc agacaggtga gctctcaaca gatacatgtc cctcgccttc 11280
tcaggaaaga tgggcagtaa tgagggcaga agccacaaag aggaaaccgt agtgacagga 11340
cccagggtcc ttcaagctgc ggtggggcaa gcgctcggga cagtggtgag ggagcagctc 11400
agccccaggt ggtgcctggc aacccgcccc gggacgtccc acccagggca gcagtagagt 11460
gacatggata gaaagctgaa ttccccagaa gagcctggag gacattgaag tacttcgcat 11520
agagcctcgg gttggattag tagtacatac agaatgatcc acatgtgaag ataagaccat 11580
gattggctcc agagaaaaca gcagtgcaag caagaagagg tagctagtca cagtttacga 11640
tctggcaata gcgtttacac agtcatcacc atagaaatgc cgagtcagga tctagtttac 11700
tgcagaactc tatcaggagg actggaagat ggggacgctg tccacatgca gggaatgcag 11760
ttggtgaaat ggaagctaaa tgctcatttt cctcagtggg aagctgtggc ttgaagatga 11820
ctgtaaactc tctttccgcc tcttcaatct tgacaggccc cagggctgct aagctaatat 11880
ggcagaaggg acactgtgcc agttgcaggc ccaggcctta agagactggc agcttccccc 11940
ctctgtctct ggaaacctac ctgcccttct gtaaggaagc ccaagcagct ctggagaagc 12000
ccttatggag gggcccactc tcagcccaca gccagcacca gttgggcagc cacgcagacc 12060
cccaacctgc aagccaggcc cgctgaggcc tcagtacaca caggcagtcc catcagccct 12120
gcccagatgg cagttttgtg atcaaaatat agacgataga tgattgtttt ttaaggttgt 12180
tgggggtagt ttgtcacaca acgatagata atagaacatc agtaggctgt gtgtgtgtgt 12240
gtgtgtgtgt agcatatata tatacacata tacatatata cacatataca tatacacata 12300
cacatatata cacgtataca tatatacaca tacatatata cacatatata cacatacata 12360
tatacacata cacatatata cacatacaca catacacata tacatatata cacatatatg 12420
catatataca catatataca tatatacaca tagcttcaaa ttcagacatg aagaagtatc 12480
ttatttagca acagtggtaa atagtaaaac accaagagag aggaaagtgg ttgcctcaga 12540
gatgggaaaa tgcaaggagg gagacggaac tgctgtttgt tttaacaaac cttgtagatc 12600
tgtttgatac tttaaactac attcacatat aacttggaca aaagtaaaaa ctgaagttga 12660
aaaaaatgta ttcatgctaa tagcacagga atgatccaca attggattcc aaggcttctt 12720
gtacattcag catagggtgt atgaaagagt ccactattct agcaacagat aaaattccta 12780
ctgacacgca acctcaggtt cccactcgtt tagaaggctg cgtatggtct tctacttaaa 12840
gcctcaagta gcagtcatgg cagtgacaaa tcctcattgc ctccatagaa cctctaggct 12900
catgtgtgag cccaggctgg gctggggccc ctgggagccc agggtgaggg gccagtccct 12960
gggcagctcc gtgagccagg agcagctgtg ccacctgggg aagggctgca cggtcgatgg 13020
gtcttttctg cagaagagtg tgccccagcc cttgctgggc acagatcaaa gaggtgttca 13080
tgggtcgaaa tcacagattt caagggctga taggagtcag agtgggggggg ctgggagggc 13140
tgaggcaggt taaagatttg agaggggctg ctgtgtccac agctgcatca cactgctctg 13200
ctgtcccctc catgttcccc ggcactgccg cctaccctgg ggtcttctgg aagtaactga 13260
aggccccctc aacctggctc atcatcaaag cagactgttg actagctgca ggcaaatatg 13320
aagaggctat                                                       13330
```

<210> 8
<211> 3100
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (125)..(2734)

<400> 8
cggcgccgcc ggcctcccgg gagcgacgct cgtgacaact gagctgctga aggcaggagg 60

aactctgagc tgaatagtag tgggtccctg aatctggaga gaagacgcca ccttggaacc 120

agta atg aac cat cct gac tac aag ctg aac ctt cgg tct ccg ggg acc 169
Met Asn His Pro Asp Tyr Lys Leu Asn Leu Arg Ser Pro Gly Thr
1 5 10 15

ccc aga ggt gtg tcc tct gtg gtt ggc ccg agt gct gtt ggt gct tcg 217
Pro Arg Gly Val Ser Ser Val Val Gly Pro Ser Ala Val Gly Ala Ser
20 25 30

cca ggt gac aaa aag tca aag aac aag tcc atg cga ggg aag aaa aag 265
Pro Gly Asp Lys Lys Ser Lys Asn Lys Ser Met Arg Gly Lys Lys Lys
35 40 45

agc ata ttt gaa acc tac atg tcc aag gag gat gtt tca gaa ggc ttg 313
Ser Ile Phe Glu Thr Tyr Met Ser Lys Glu Asp Val Ser Glu Gly Leu
50 55 60

aag aga gga aca ctt atc cag ggt gta ttg aga atc aac cca aag aag 361
Lys Arg Gly Thr Leu Ile Gln Gly Val Leu Arg Ile Asn Pro Lys Lys
65 70 75

ttt cat gaa gcc ttc att cct tct ccg gat ggt gat cgg gac att ttt 409
Phe His Glu Ala Phe Ile Pro Ser Pro Asp Gly Asp Arg Asp Ile Phe
80 85 90 95

att gat gga gtt gtt gct cgt aat aga gcc tta aat ggg gac ctt gtg 457
Ile Asp Gly Val Val Ala Arg Asn Arg Ala Leu Asn Gly Asp Leu Val
100 105 110

gtt gta aaa ctg ctt cct gag gat cag tgg aag gca gtt aaa cca gag 505
Val Val Lys Leu Leu Pro Glu Asp Gln Trp Lys Ala Val Lys Pro Glu
115 120 125

agc aat gac aaa gaa ata gaa gct act tat gaa gct gac atc cct gaa 553
Ser Asn Asp Lys Glu Ile Glu Ala Thr Tyr Glu Ala Asp Ile Pro Glu
130 135 140

gag ggc tgt gga cat cac ccc ctg cag cag tcc cgg aaa ggc tgg agt 601
Glu Gly Cys Gly His His Pro Leu Gln Gln Ser Arg Lys Gly Trp Ser
145 150 155

ggt cct gat gtc att ata gag gct cag ttt gat gac agc gac tca gaa 649
Gly Pro Asp Val Ile Ile Glu Ala Gln Phe Asp Asp Ser Asp Ser Glu
160 165 170 175

gat aga cat ggc aac acc agt ggc ctg gtt gat ggt gtt aag aaa ttg 697
Asp Arg His Gly Asn Thr Ser Gly Leu Val Asp Gly Val Lys Lys Leu
180 185 190

tca atc tct act cct gac aga gga aaa gaa gat tct agt act cca gtt 745
Ser Ile Ser Thr Pro Asp Arg Gly Lys Glu Asp Ser Ser Thr Pro Val
195 200 205

atg aaa gat gag aac acc ccc ata cca cag gac aca aga ggc tta tca 793
Met Lys Asp Glu Asn Thr Pro Ile Pro Gln Asp Thr Arg Gly Leu Ser
210 215 220

gag aag tca ctt cag aaa tca gca aag gtg gtt tac atc ttg gag aaa 841

```
Glu Lys Ser Leu Gln Lys Ser Ala Lys Val Val Tyr Ile Leu Glu Lys
    225                 230                 235

aag cat tct cga gca gca act ggc atc ctg aaa ctc ttg gct gat aag   889
Lys His Ser Arg Ala Ala Thr Gly Ile Leu Lys Leu Leu Ala Asp Lys
240                 245                 250                 255

aac agt gac ctg ttt aag aaa tac gcc ctg ttt tct cct tca gac cac   937
Asn Ser Asp Leu Phe Lys Lys Tyr Ala Leu Phe Ser Pro Ser Asp His
                260                 265                 270

cga gta cct aga att tac gta cct ctc aag gac tgt ccc cag gac ttc   985
Arg Val Pro Arg Ile Tyr Val Pro Leu Lys Asp Cys Pro Gln Asp Phe
            275                 280                 285

atg acc cga cct aaa gac ttt gcc aac acg ctg ttc atc tgc cgc atc   1033
Met Thr Arg Pro Lys Asp Phe Ala Asn Thr Leu Phe Ile Cys Arg Ile
        290                 295                 300

ata gac tgg aag gag gac tgt aat ttt gcc ctg ggg caa ctg gct aag   1081
Ile Asp Trp Lys Glu Asp Cys Asn Phe Ala Leu Gly Gln Leu Ala Lys
    305                 310                 315

agt ctt ggg cag gct ggt gaa atc gag cct gaa aca gaa ggg ata ctg   1129
Ser Leu Gly Gln Ala Gly Glu Ile Glu Pro Glu Thr Glu Gly Ile Leu
320                 325                 330                 335

aca gaa tat ggt gtg gac ttc tct gat ttc tct tca gaa gtt ctt gaa   1177
Thr Glu Tyr Gly Val Asp Phe Ser Asp Phe Ser Ser Glu Val Leu Glu
                340                 345                 350

tgt ctc cct caa agc ctg ccc tgg aca atc cca cct gat gag gtg ggc   1225
Cys Leu Pro Gln Ser Leu Pro Trp Thr Ile Pro Pro Asp Glu Val Gly
            355                 360                 365

aag aga aga gac cta agg aaa gac tgt atc ttc acc att gat cca tca   1273
Lys Arg Arg Asp Leu Arg Lys Asp Cys Ile Phe Thr Ile Asp Pro Ser
        370                 375                 380

act gct cgc gac ctt gat gat gcc ctc gcc tgc agg cgg ctc act gat   1321
Thr Ala Arg Asp Leu Asp Asp Ala Leu Ala Cys Arg Arg Leu Thr Asp
    385                 390                 395

ggc acc ttc gaa gtg ggc gtc cac atc gcc gat gtg agt tac ttt gtt   1369
Gly Thr Phe Glu Val Gly Val His Ile Ala Asp Val Ser Tyr Phe Val
400                 405                 410                 415

cct gag gga tcc tct ttg gat aaa gta gct gct gag aga gcc aca agt   1417
Pro Glu Gly Ser Ser Leu Asp Lys Val Ala Ala Glu Arg Ala Thr Ser
                420                 425                 430

gtc tac ttg gtc cag aag gtg gtc ccc atg ctt ccc agg ctt ctg tgt   1465
Val Tyr Leu Val Gln Lys Val Val Pro Met Leu Pro Arg Leu Leu Cys
            435                 440                 445

gag gaa ctc tgc agc ctc aac ccc atg act gac aag ctg acc ttc tct   1513
Glu Glu Leu Cys Ser Leu Asn Pro Met Thr Asp Lys Leu Thr Phe Ser
        450                 455                 460

gtg atc tgg aag ctg acc cct gaa ggc aag atc ctt gaa gag tgg ttt   1561
Val Ile Trp Lys Leu Thr Pro Glu Gly Lys Ile Leu Glu Glu Trp Phe
    465                 470                 475
```

```
ggc cgc act atc atc cgt tct tgc acc aaa ctg agc tac gac cat gcc   1609
Gly Arg Thr Ile Ile Arg Ser Cys Thr Lys Leu Ser Tyr Asp His Ala
480                 485                 490                 495

cag agc atg atc gaa aat cca act gag aag atc cct gag gaa gag ctt   1657
Gln Ser Met Ile Glu Asn Pro Thr Glu Lys Ile Pro Glu Glu Glu Leu
                500                 505                 510

ccc cca att tct cca gag cac agc gtc gag gag gtg cac cag gca gtc   1705
Pro Pro Ile Ser Pro Glu His Ser Val Glu Glu Val His Gln Ala Val
            515                 520                 525

ctg aac ctg cac agc att gca aag caa ctc cgc cgc cag cgc ttt gta   1753
Leu Asn Leu His Ser Ile Ala Lys Gln Leu Arg Arg Gln Arg Phe Val
        530                 535                 540

gat ggc gca ctc cgt tta gat cag ctg aag ctt gct ttt act ctg gac   1801
Asp Gly Ala Leu Arg Leu Asp Gln Leu Lys Leu Ala Phe Thr Leu Asp
    545                 550                 555

cat gag act gga ctg cct caa gga tgt cac atc tat gag tac cga gac   1849
His Glu Thr Gly Leu Pro Gln Gly Cys His Ile Tyr Glu Tyr Arg Asp
560                 565                 570                 575

agc aac aag ctt gta gag gag ttc atg ctc ctg gcc aac atg gcg gtg   1897
Ser Asn Lys Leu Val Glu Glu Phe Met Leu Leu Ala Asn Met Ala Val
                580                 585                 590

gcc cac aag atc ttc cgc acc ttc cct gag cag gcc ctg ctg cgc cgg   1945
Ala His Lys Ile Phe Arg Thr Phe Pro Glu Gln Ala Leu Leu Arg Arg
            595                 600                 605

cat ccc cca cca cag acg aag atg ctc agt gac ctg gtg gag ttc tgt   1993
His Pro Pro Pro Gln Thr Lys Met Leu Ser Asp Leu Val Glu Phe Cys
        610                 615                 620

gac cag atg ggg ctg ccc atg gat gtc agc tct gca ggg gcc cta aat   2041
Asp Gln Met Gly Leu Pro Met Asp Val Ser Ser Ala Gly Ala Leu Asn
    625                 630                 635

aaa agc ctg act aag aca ttt gga gat gac aag tac tct ctg gcc cgg   2089
Lys Ser Leu Thr Lys Thr Phe Gly Asp Asp Lys Tyr Ser Leu Ala Arg
640                 645                 650                 655

aag gag gtg ctc acc aac atg tac tcc cgg ccc atg cag atg gca ctg   2137
Lys Glu Val Leu Thr Asn Met Tyr Ser Arg Pro Met Gln Met Ala Leu
                660                 665                 670

tac ttc tgc tct ggg atg ctg cag gac cag gag cag ttc cgg cat tat   2185
Tyr Phe Cys Ser Gly Met Leu Gln Asp Gln Glu Gln Phe Arg His Tyr
            675                 680                 685

gct ctc aac gtt ccc ctc tac aca cac ttc acc tct ccc atc cgc cgc   2233
Ala Leu Asn Val Pro Leu Tyr Thr His Phe Thr Ser Pro Ile Arg Arg
        690                 695                 700

ttt gct gac gtc ata gtg cac cgc ctc ctg gct gct gct ctg ggc tac   2281
Phe Ala Asp Val Ile Val His Arg Leu Leu Ala Ala Ala Leu Gly Tyr
    705                 710                 715

agt gaa cag cca gat gtg gag cct gat acc cta cag aag caa gct gac   2329
Ser Glu Gln Pro Asp Val Glu Pro Asp Thr Leu Gln Lys Gln Ala Asp
720                 725                 730                 735
```

```
cac tgc aat gac cgt cgc atg gct tcc aaa cgt gtg cag gag ctc agc   2377
His Cys Asn Asp Arg Arg Met Ala Ser Lys Arg Val Gln Glu Leu Ser
                740                 745                 750

atc ggc ctc ttc ttc gca gtt cta gta aag gag agt ggc ccc ctg gag   2425
Ile Gly Leu Phe Phe Ala Val Leu Val Lys Glu Ser Gly Pro Leu Glu
            755                 760                 765

tcc gaa gcc atg gtg atg ggt gtc ctg aac caa gct ttc gac gtg ctg   2473
Ser Glu Ala Met Val Met Gly Val Leu Asn Gln Ala Phe Asp Val Leu
        770                 775                 780

gtg ctg cgc ttt ggg gtg cag aag cgc atc tac tgc aat gca ctg gcc   2521
Val Leu Arg Phe Gly Val Gln Lys Arg Ile Tyr Cys Asn Ala Leu Ala
    785                 790                 795

ctg cga tcc tac agc ttc cag aag gtg ggg aag aag cca gag ctc act   2569
Leu Arg Ser Tyr Ser Phe Gln Lys Val Gly Lys Lys Pro Glu Leu Thr
800                 805                 810                 815

ctt gtt tgg gag cct gat gac ctt gaa gag gag cca aca cag cag gtc   2617
Leu Val Trp Glu Pro Asp Asp Leu Glu Glu Glu Pro Thr Gln Gln Val
                820                 825                 830

atc acc atc ttc agc ctg gtg gat gtg gtc ctg cag gca gag gcc aca   2665
Ile Thr Ile Phe Ser Leu Val Asp Val Val Leu Gln Ala Glu Ala Thr
            835                 840                 845

gcc ctc aag tac agt gct atc ctg aag cga cca ggc ctg gag aag gcg   2713
Ala Leu Lys Tyr Ser Ala Ile Leu Lys Arg Pro Gly Leu Glu Lys Ala
        850                 855                 860

tct gat gag gag cct gag gac tgaatgctag cccaagccag gcctgtgcct      2764
Ser Asp Glu Glu Pro Glu Asp
    865                 870

gccctaccct gctggctttt aggaatagga ccttttgaca ccaaagggga tttttaattt 2824

ggtttttaac aactcagggg tttgttttta tttttatttt tccttttatt ttacttttgc 2884

agctcagttt ttaaatgaac tggaaggtta ggggtcaggg caggggatgc tgaggcctgg 2944

cctgtgcttc cctgagcaga gaggatccca gtcctcctgg gcaggcagcc ccgcttctac 3004

caggcgaccc actgcccttc cctgcccagg aaatgggggg tttcagcaaa tcagtgtcat 3064

ggaataaaat caagtgtgaa aaaaaaaaaa aaaaaa                           3100


<210> 9
<211> 870
<212> PRT
<213> Mus musculus

<400> 9
Met Asn His Pro Asp Tyr Lys Leu Asn Leu Arg Ser Pro Gly Thr Pro
  1               5                  10                  15

Arg Gly Val Ser Ser Val Val Gly Pro Ser Ala Val Gly Ala Ser Pro
             20                  25                  30

Gly Asp Lys Lys Ser Lys Asn Lys Ser Met Arg Gly Lys Lys Lys Ser
```

```
         35                  40                  45

Ile Phe Glu Thr Tyr Met Ser Lys Glu Asp Val Ser Glu Gly Leu Lys
     50                  55                  60

Arg Gly Thr Leu Ile Gln Gly Val Leu Arg Ile Asn Pro Lys Lys Phe
 65                  70                  75                  80

His Glu Ala Phe Ile Pro Ser Pro Asp Gly Asp Arg Asp Ile Phe Ile
                 85                  90                  95

Asp Gly Val Val Ala Arg Asn Arg Ala Leu Asn Gly Asp Leu Val Val
            100                 105                 110

Val Lys Leu Leu Pro Glu Asp Gln Trp Lys Ala Val Lys Pro Glu Ser
        115                 120                 125

Asn Asp Lys Glu Ile Glu Ala Thr Tyr Glu Ala Asp Ile Pro Glu Glu
    130                 135                 140

Gly Cys Gly His His Pro Leu Gln Gln Ser Arg Lys Gly Trp Ser Gly
145                 150                 155                 160

Pro Asp Val Ile Ile Glu Ala Gln Phe Asp Asp Ser Asp Ser Glu Asp
                165                 170                 175

Arg His Gly Asn Thr Ser Gly Leu Val Asp Gly Val Lys Lys Leu Ser
            180                 185                 190

Ile Ser Thr Pro Asp Arg Gly Lys Glu Asp Ser Ser Thr Pro Val Met
        195                 200                 205

Lys Asp Glu Asn Thr Pro Ile Pro Gln Asp Thr Arg Gly Leu Ser Glu
    210                 215                 220

Lys Ser Leu Gln Lys Ser Ala Lys Val Val Tyr Ile Leu Glu Lys Lys
225                 230                 235                 240

His Ser Arg Ala Ala Thr Gly Ile Leu Lys Leu Leu Ala Asp Lys Asn
                245                 250                 255

Ser Asp Leu Phe Lys Lys Tyr Ala Leu Phe Ser Pro Ser Asp His Arg
            260                 265                 270

Val Pro Arg Ile Tyr Val Pro Leu Lys Asp Cys Pro Gln Asp Phe Met
        275                 280                 285

Thr Arg Pro Lys Asp Phe Ala Asn Thr Leu Phe Ile Cys Arg Ile Ile
    290                 295                 300

Asp Trp Lys Glu Asp Cys Asn Phe Ala Leu Gly Gln Leu Ala Lys Ser
305                 310                 315                 320

Leu Gly Gln Ala Gly Glu Ile Glu Pro Glu Thr Glu Gly Ile Leu Thr
                325                 330                 335

Glu Tyr Gly Val Asp Phe Ser Asp Phe Ser Ser Glu Val Leu Glu Cys
            340                 345                 350

Leu Pro Gln Ser Leu Pro Trp Thr Ile Pro Pro Asp Glu Val Gly Lys
        355                 360                 365

Arg Arg Asp Leu Arg Lys Asp Cys Ile Phe Thr Ile Asp Pro Ser Thr
```

370 375 380

Ala Arg Asp Leu Asp Asp Ala Leu Ala Cys Arg Arg Leu Thr Asp Gly
385 390 395 400

Thr Phe Glu Val Gly Val His Ile Ala Asp Val Ser Tyr Phe Val Pro
405 410 415

Glu Gly Ser Ser Leu Asp Lys Val Ala Ala Glu Arg Ala Thr Ser Val
420 425 430

Tyr Leu Val Gln Lys Val Val Pro Met Leu Pro Arg Leu Leu Cys Glu
435 440 445

Glu Leu Cys Ser Leu Asn Pro Met Thr Asp Lys Leu Thr Phe Ser Val
450 455 460

Ile Trp Lys Leu Thr Pro Glu Gly Lys Ile Leu Glu Glu Trp Phe Gly
465 470 475 480

Arg Thr Ile Ile Arg Ser Cys Thr Lys Leu Ser Tyr Asp His Ala Gln
485 490 495

Ser Met Ile Glu Asn Pro Thr Glu Lys Ile Pro Glu Glu Glu Leu Pro
500 505 510

Pro Ile Ser Pro Glu His Ser Val Glu Glu Val His Gln Ala Val Leu
515 520 525

Asn Leu His Ser Ile Ala Lys Gln Leu Arg Arg Gln Arg Phe Val Asp
530 535 540

Gly Ala Leu Arg Leu Asp Gln Leu Lys Leu Ala Phe Thr Leu Asp His
545 550 555 560

Glu Thr Gly Leu Pro Gln Gly Cys His Ile Tyr Glu Tyr Arg Asp Ser
565 570 575

Asn Lys Leu Val Glu Glu Phe Met Leu Leu Ala Asn Met Ala Val Ala
580 585 590

His Lys Ile Phe Arg Thr Phe Pro Glu Gln Ala Leu Leu Arg Arg His
595 600 605

Pro Pro Pro Gln Thr Lys Met Leu Ser Asp Leu Val Glu Phe Cys Asp
610 615 620

Gln Met Gly Leu Pro Met Asp Val Ser Ser Ala Gly Ala Leu Asn Lys
625 630 635 640

Ser Leu Thr Lys Thr Phe Gly Asp Asp Lys Tyr Ser Leu Ala Arg Lys
645 650 655

Glu Val Leu Thr Asn Met Tyr Ser Arg Pro Met Gln Met Ala Leu Tyr
660 665 670

Phe Cys Ser Gly Met Leu Gln Asp Gln Glu Gln Phe Arg His Tyr Ala
675 680 685

Leu Asn Val Pro Leu Tyr Thr His Phe Thr Ser Pro Ile Arg Arg Phe
690 695 700

Ala Asp Val Ile Val His Arg Leu Leu Ala Ala Ala Leu Gly Tyr Ser

```
705                 710                 715                 720

Glu Gln Pro Asp Val Glu Pro Asp Thr Leu Gln Lys Gln Ala Asp His
                725                 730                 735

Cys Asn Asp Arg Arg Met Ala Ser Lys Arg Val Gln Glu Leu Ser Ile
            740                 745                 750

Gly Leu Phe Phe Ala Val Leu Val Lys Glu Ser Gly Pro Leu Glu Ser
        755                 760                 765

Glu Ala Met Val Met Gly Val Leu Asn Gln Ala Phe Asp Val Leu Val
    770                 775                 780

Leu Arg Phe Gly Val Gln Lys Arg Ile Tyr Cys Asn Ala Leu Ala Leu
785                 790                 795                 800

Arg Ser Tyr Ser Phe Gln Lys Val Gly Lys Lys Pro Glu Leu Thr Leu
                805                 810                 815

Val Trp Glu Pro Asp Asp Leu Glu Glu Glu Pro Thr Gln Gln Val Ile
            820                 825                 830

Thr Ile Phe Ser Leu Val Asp Val Val Leu Gln Ala Glu Ala Thr Ala
        835                 840                 845

Leu Lys Tyr Ser Ala Ile Leu Lys Arg Pro Gly Leu Glu Lys Ala Ser
    850                 855                 860

Asp Glu Glu Pro Glu Asp
865                 870
```

<210> 10
<211> 49999
<212> DNA
<213> Mus musculus

<400> 10

```
gatcctgact tcactatcca tagatagtta ggtttctagt actaggcatg ctttctctct 60
agttgatggc cttggtgctc agttagagag ctcttgttta ccatcaagct atacatgcca 120
ttactgcacc tttagtgtta atcttgccat gatgttcatt gttgttgttt atacgcatca 180
taactccctc tcctgcaggc tcactgacag taagatagaa attcctctgc tgctctgtgc 240
agtaggcagc ctacacatct acatgctgta tacccatata gctaagtagg acttttgttt 300
gcttctcttc cttggaaact tgcataatgc cctctggtat aatgaaagct agttccagag 360
aggaggtttt ccagtcagat ccagctcagg tcctcttagt cctatctgaa gtatatagtg 420
tcttcagctt gctgtagtgt atgtatagaa gccatagcaa aattttcacg ggtagatcct 480
ccccttccac ctttttgaag cagggtctct ctttttgttt ctgtcatact gtgcacccca 540
ggccagctga cccatgagct tctgggcagt tcttttatcg catattccat aggagtgctg 600
gagttataga tgtgtttacc acattcaacc ttttgtgtgt gttctgagtg aggcagttgg 660
ctgtcccagg gacacaaact gtgatctgga atgtttctga tatggtataa tagaattata 720
ttatgcttag ccagattaac tatttggccc catttttta ataactattc ctgagtcctg 780
tccctgtctc agataccacg taacattctt tggcatactc tgtttacctg aatgagagag 840
ggtgcagaaa agtatctgta gctgatcctt gaaggacctg atcccatccc cattgacagg 900
gaggccacag atcaaacctc cctgctgcct gatggtacct gttctctctt ggggcaagga 960
gaagtttgag tcaagtcaca aagaggaaga gaatggtgat cacatctctg actctcctag 1020
cctcacattt ctctctcctt atgtgcaaaa caactgttct ttaacattct gtgacagtgg 1080
attatttgtg ataattctgt tttccatctt tcctaggaaa gactgtatct tcaccattga 1140
tccatcaact gctcgcgacc ttgatgatgc cctcgcctgc aggcggctca ctgatggtag 1200
gatagacatt cctctgctac tctgtgccgt agcaacctgc acacccgtgt gctgtacacc 1260
catgtcaggc ttccttgtgc tgtttcagca gcctaatggg caaggacggg gttgcttcag 1320
tcccgaaatt ggctatacaa gctaagtaga gtggggtggc agcagacact acctcctaag 1380
acatggttgt ctaggcctga cttgcagaag cccctctata ccatgtagct ctttgtctat 1440
```

taaaaagact gtgagggctg gagaggtggc tcagtggtta agagcactga ctgctcttcc 1500
agaggtcctg agttcaactc ccagcagcca catggtggct cacaaccatc tgtaatggga 1560
tccaatgcct tcttctactg tgtctgaaga cagcgacagt gtactcacat acataaaata 1620
attcttaaaa aaaaaagatt gtgaatggcc aactgacttt tcaaaaagtc agggtctcag 1680
tcatggatga ttgtagtaga cagaatagta gcagctgatt gtcgaaagac ttggagacag 1740
tgtgaggaaa aaacccctaa cagttctctc catccctgca gatacatttt ctaggtatgt 1800
ctgacccttt tcttaggggt gccttggtga ctactatgac atttattatt cttgaagatt 1860
actttagact aacatggcct ttgatggtgt accagtgagg tatgcataac tttttatgtt 1920
tgtctgccac agagcattga tggcctacct tcaaagtatt caccctcat cttcttctgg 1980
tgcaaacctc agtgtttcct tctctgttgc aataaatagt gatgattatc agacagaagc 2040
taagagacag aacatgctgc ctaaaactgc ttagcttctt ttagtaggag ctctctccac 2100
ccaccccaca aataatcctg tgcataagac tcatgcgtgc taggcaacac tctgttactg 2160
agctgtatct tcagcacagt actctcagtt gtgtttctat aatctaaaat taggacagcc 2220
tatttacaag agcaaacttt ggcccaacgc cttacattct gattacgctc tgctgtgcac 2280
ctcttgcttg aacaagcctc ctctctctgc agatcctact ctctaaaaca ccaatatgaa 2340
cagtacccaa ggcagagacc tggtgatgct gggccttcat ctcctggggt tattgctcct 2400
ctctgttagt ggttgaaaac agctgttccg tttattctct ctagttttaa gttgtttata 2460
gcagaagtct aatatctgtt tctctatctc tgatagcctc aaactcttga acttgcaggg 2520
agagcaggga gctagcatat gtccttcctc actcactctg cagggccact tcacacttct 2580
gctatgcaag tgtgagggca aaggtttcat ggagaaaatg ctgcaagaaa agcagatgag 2640
cagcaagtaa tgttctttat ttgtcagacc atacaaaatc acatagacat tgttctgcag 2700
gaattcagcc acagcaggga gaaataagtt atcaaaagac taaaggaaaa ggagaagagg 2760
taggccagga aaatgccaga aaaagtcaca cgtataggca tacagacctg gactggagat 2820
tataagcaag atccgtgagg agtgaggtaa cagagacgag aaagagaaga atctgtggaa 2880
acaggtggca gaagggacaa agaagagaca gaggtgggtc atcctggatg gtggggaaat 2940
atccacaggt agaaattgga aagtcaggag gacatgctgc tggttttgat caggctacca 3000
catggagttg cctgtctcat aataagcatt tatatgaatt actgctaacc tatttttaaa 3060
ggacaagaga ataaataaag agtagatggt gtcataaagc tatagcagga gagccctgag 3120
gggagacaag cagcgtacct agtacagaga ttgaacctaa cctcctagga agatgggatc 3180
ataggccatt ttcctctctg tccaaatttt ataatgtggt aatagtagct ttataatgaa 3240
aaagctttgt agtaaaaaat tatgaggtga caggaatccc aagctgccca gaagtcaccc 3300
atcgcaccaa gtgatcagag ccttccttct atgtgcttgg tatttcttgc attccagaga 3360
gacagttgac atctgtgcat ctggcggggc aacagcataa ggaagaaacc agcgaagtct 3420
tgggaaaagc cgaggtagtc agtcaagcat ttttatggtg gcacttccac agttggccat 3480
tgggacagct ggatctgcca ggatcattta tccagggaga tgaaaagcaa ataggcaagt 3540
ccagtttgga ttgggatggc cttggctaag ttcagattcc attagttacc agttcatgtc 3600
agttcctact tagaggaaaa tatttactgt tttaaaaagc aaataatgtt ttctggccat 3660
atttatataa tctgtgttta tttaaataaa atactgtata aaaggtatgt ttttctttgg 3720
tctcacagaa atcatctgaa tggctattgt gtgaaaaatc aactctacag acagatagag 3780
ctttccaatg ctcacacttc cttccataga gttccagggt acacccaggt ctttcctatc 3840
aggtgcaaga tacagacaat caattgtgta acatgttaaa tttaaccgaa aggaggagga 3900
ggtgtatccc cacctccctt ccaaagcaga gcttctacca tgcatctgat ctgggattcg 3960
ctcctttagc cccaaacaca cctaaggaga aggagcactc cccagcaatg tggattcttc 4020
actttgcata agaaaatatt taataaaaag tggtattgta atgatatccc agaatctaaa 4080
gacagtaaat cccagttcag tattttatga ttgtaacaga ttgcttgcag cacacctcac 4140
agttgacctc acattagtct gggaatacca cagttgtaag ctcaccctct ggtttcttaa 4200
taactcttgc agcattcact ttattgaata tccagattgc atttgaactt gttactccaa 4260
aggcagtctg ttctgccata agattgtgtg actcttagga aatcctcccc tgaaagaatc 4320
agaaatactg ttgttatctt tctgcaatgt ttcatttgtt agtcctgtta atgctcctca 4380
gtgccctgaa gcacaaatac agtgtctcgt gtgaaaatct ttccaaacaa gatctatcat 4440
ttctcttctg aatcacatct cagctaagga acctaaatat cctttcatgt tttgtggctg 4500
atttcttagt gtgaatccac tcaccacgtc atagagtctt tctgcctctg agaggtctac 4560
ggtgtatgac tccctgcctg gcaagctctc ctagaaagtt catctttact gaaagaattg 4620
ggatctggat aatatgtacc cattttgttc agttattgct tttccatggg tgtcaaagac 4680
catactgtca gatagatggg ttctttagca aactgtcagg cagagtcttt agctttagtt 4740
gattctggaa ccccacaatt ctgcatcttg ttttgtaatt tgaattttct aaggtttgct 4800
ctgtcattga acatggctgg gctgtccttg ccaggcctta gaagtgaatg agcaggagat 4860
gggaacagct gctaatgaac ttgggctttt tttggagaga tgaaagagtt ctgaacaatt 4920
ttgtgaaaat gttaaaacca caaaggaaag atgaatgagt gaagaatgga tgaatgagaa 4980
aaattaatga acaaatctta atccacttat ttttgatact ttatggagat tagaatttag 5040
attttgtcca tgactaagca gggatcttaa tgggatgtcc atctgggtac cttatagtca 5100
catccttatt gccattctga tgggagtaag gtggaatctc acagctggta tactttacat 5160
ttccctgata actcaggatg ttgaacattt ctttaggtac ttcttggcca tttgaaattc 5220

ctccatttta tattatttgt gactattgag aagggtgttg tttccctaat ttctttctca 5280
gcctgtttat cctttgtgta gagaaaggtc attgacttgt ttgagttaat tttatatcca 5340
gctacttcac tgaagctgtt tatcaggctt aggagttctc tggtggaatt tttagggtca 5400
cttatatata tactatcata tcatctgcaa aaagtgatat tttgacttct tcctttccaa 5460
tttgtatccc cttgatctcc ttttgttgtc taattgctct ggctaggact tcaagtacaa 5520
tgttgaatag gtagggagat agtggacagc cttgtctagt ccctgatttt agtgggatta 5580
cttccagctt ctcaccattt actttgatat tggctactgg tttgctgtag attgctttta 5640
tcatgtttag gtatggctct tgaattcctg atctttccaa gacttttatc atgaatgggt 5700
gttggatttg gtcaaatgct ttctcagcat ctaacgagat gatcatgtgg tttttgtctt 5760
tgagtttgtt tatatactgg attacattga tggatttccg tatattgaac catccctgca 5820
tccctgggat gaaacctact tggtcaggat ggatgattga tttgatgtgt tcttggattc 5880
agttagcgag aactttattg aggatttttg catcgatatt cataagggaa attggtctga 5940
agttctctat ctttgttggg tctttttgtg gtttaggtat cagagtaatt gtggcttcat 6000
agaatgagtt gggtagagta ccttctgttt ctattttgtg gaataatata aaataccttg 6060
gcgtgactct aactaaggaa gtgaaagatc tgtatgataa gaacttcaag tctctgaaga 6120
aagaaattaa agaagatctc agaagataga aagatctccc atgctcatgg attggcagga 6180
tcaatatagt aaaaatggct atcttgccaa aagcaatcta cagatttaat gcaatcccca 6240
tcaaaattcc aactcaattc ttcaacgaat tagaaagggc aatcggcaga ttcatctgga 6300
ataacaaaaa acctaggata gcaaaaactc ttctcaagga taaaagaacc tctggtggaa 6360
tcaccatgcc tgacctaaag ctgtactaca gagcaattgt aataaaaact gcaatggtac 6420
tggtatagcg aaagacaagt agaccaatgg aacagaattg aagacccaga gatgaaccta 6480
cacacctatg gtcacttgat ctttgacaag ggagctaaaa ccatccagtg gaaaaaagac 6540
agcattttca acaaatggtg ctggcacaac tggctgttat catgtagaag aattcaaatt 6600
gatccattcc tatctccttg tactaaggtc aaatctaagt ggattaagga acaccacata 6660
aaaccagaga cactgaaact tatagaggag aaagtaggga aaagccttga aggtatgggt 6720
acaggggaaa aattcctgaa tagaacagca gtggtgtgtg ctgtaagatc gagaatcaaa 6780
aaatgggacc tcataaagtt gcaaagcttc tgcaaggcaa aagacaccgt gagtaagaca 6840
aaaagaccac caacagattg ggaaaggatc tttacctatc ctaaatcagg taggggacta 6900
atatccaata tatataaaga actcaagaag gtagactcca gaaaatcaaa taaccacatt 6960
aaaaaatggg gctcagagct gaacaaagat atctcacctg aggaataccg aatggcagag 7020
aagcacctga aaaaatgttc aacatcctta atcatcaggg aaatgcaaat caaaacaacc 7080
ctgagattcc acctcacacc agtcagaatg gctaagatca aaaattcagg tgacagcaga 7140
tgttggcgag gatgtggaga aagaggaaca ctcctccatt gttggtggga ttgcaagctt 7200
gtacaaccac tctggaaatc agtctggcag ttcctcagaa aattggacat agtgctaccg 7260
gaggatacca caatactttt cctgggcata tatccagaag atgtcccaac cggtaagaag 7320
aacagatgtt ccactatgtt catagcagcc ttatttttat tagccagaag ttggaaagaa 7380
cccaatgccc ctcaacagag gaatggatac agaaaatgtg gtacatttac acaatggggt 7440
actactcagc tattaaaaag aatgaattta tgaaattcct aggcaaatgg atggacctgg 7500
agggcatcat cctgagtgag gtaacccaat cacaaagtaa ctcacacaat atgtactcac 7560
tgataagtgg atattagccc agaaacttag tatacccaag atataagata caatttgcta 7620
aatgcatgaa actcaagaag aacgaagacc aaagtgtgga cactgcccct tcttagaatt 7680
gggaacaaaa cacccataga aggagttaca gagagaaagt ttggagctgg gacgaaagga 7740
tggaccatct agagactgtc atatctgggg atccatccca taatcagctt ccaaacgctg 7800
acaccattgc atacactagc aagattttgc tgaaaggacc cagatatagc tgtctcttgt 7860
gagactatgc cggggcctag caaacacaga agtggatgct cacagtcagc tatcagatag 7920
atcatagggc ccccaatgga ggagctagag aaagtaccca gggagctaaa gggatctgca 7980
accctatagg tggaacaaca ttatgaatta accagtaccc cggagctctt gactctagct 8040
gcatatgtat caaaagatgg cctagttggc catcactgga aagagaggcc cattggactt 8100
gcaaactcta tttgccccag tacaggggaa cgccagggcc aaaaagtggg agtgggtggg 8160
taggggagtg gaggggaggg tatgggggac ttttgagata gcattggaaa tgtaaatgaa 8220
gaaaatacct aataaaaaat atatttaaaa aaaaagaaat tcctccattg agaagtctct 8280
gtttaagtat gtacctcatt tttaattggg ttttctggat tgttggtgtc tgtcttgagt 8340
tctttatata ttttggatat tagccctctg tcaaatgtag agttagtgaa gatctttccc 8400
caatctgtta ggctactgtt ttatcctaat gatgatgtcc tttgacttac agaagctttt 8460
cagtttcatg tggtctcatt tattaattct tgaccttagt gcctgagcca tttgtgttct 8520
gttcaggaat ttgtctcctg tacccatgaa ttcaaggcta ttccctgctt tctcttctat 8580
taaatttagt gtatctgact tcaagttgag gtctttgatc catctggact tcagttttgt 8640
gcaggttgat aaatatgtat ctatttgcag tcttctacat gcagacatcc agttagacca 8700
gcagcatctg ttgaagatgc tctccctttt ccattgtatg gttttggctt ctttgtcaaa 8760
aatcaaatgt ccatagttat atgggtttat ttctgggtct ttgatttgat ttcattgatc 8820
cacctgtctg tttctatacc aagatcatgc aggttcttat tactattgct ctgtagtata 8880
gcttgaagtc agggatgtta tatctccaga agttctttta ttgttcagga tcgttttaac 8940
tattctgggt tttttgtttt tccttcgaag ttgagaattg ttctttcaag atctgtgaag 9000

aattgtgggg aggtaggagt tttgttgggg gtgtgacacc catagggggg atttctcctc 9060
aaaagagaag ggcaaggtgg aaaggggggg gggatactgg gaggagagga aggactaata 9120
tttgggatgt aaagtgaata aataaacaaa caaaccctgg aatcatattg gccacctttt 9180
cttctcagga ctgttgctgg gccttttcag tagccatctc tctctgacct ctgcccatta 9240
tctttctctc gctgtactta caaccagagc atgccacttt tcttagaaaa tctgtttgtg 9300
cctatggacc aagcatgcca cttttcttag aaaatctgct tgtgcctatg gaccaagtcc 9360
tcctaccaaa gccctgcaag gctagtcctc tgcttacccc ctccaacacg cactggtaca 9420
cacacttaca cacattcaca catgcacaca tacatacgca catacccaca tacacaagca 9480
agctaaaatt ctgcagatat ttttttctcc tggcagaatg aattatttct acttgatcac 9540
attagcctgt ttctaacaac aataaataca attacttctg atttactccc tttttttttct 9600
cgtttcccag ggcagtattc cttgggcatg tgtacatctc aagtattatg aactttaaaa 9660
ctgttcagtg ttgctgacct cactaggcag tcttatagta ttgctcttct ttttgctgct 9720
gtttttgttt ttttgttttt ttttttactt gacttcttca tttttctgtc tttatctata 9780
atttcatggt tgcttgtagg cttatatcct gatctataag gctcctttac ttttatccta 9840
aactaaatgt ctctttggaa tttatatagt cttcccttgt ttcatttcca ttttttaact 9900
catgtgtcat gtcttggtga taccaacagg cttactgaat tctgtcttat agttgttctg 9960
tccttttcta gcatagtgga ttttgcacac cttataccca gggtcttctt acatgagtca 10020
ctgaatgccc taaatgcttt tctctcttca tgtctatagc cttcccagag actcatagca 10080
tgtcttttat tttgtcatct gttcctgcct gtattcttgc catttccaac taaggaagag 10140
ctaacttaag cctactatgg gcagagaact taccttcctc ctcacgaatg tcttgaagct 10200
tgattatata tcagggtgtt tttgtttttt ggtttttttt ttttttgata aatatcctat 10260
gtatacctga aaaacatgtg ttctcttccc tgttgagaag tattgaaaaa tgacagtaag 10320
acagtattgc taaatgttct tggtctcccc tgctttgtgt tcctcatgcc tgcattagct 10380
tgtcttcact gtggcgagga agtaccagag agaaacattt aaaggaggaa ggttgcttgc 10440
tcccactctc agaggcttca gtccaaggga aacagtgaga gtgtacagaa acccttcacc 10500
tcttagctat caggaagctg actcttcttc catggctctt ttatctcctc tatctattta 10560
cagttgctat agatactaca cctaactgtg tgtgtttgaa ttctatgtct ttgtccattc 10620
ttccttcacc ctttttttaa aaaataggtt ggattttatg aggaaattgt gaacagttga 10680
gggttcaaga gtcattccca tgtagcaaca tttctttaca ttttttttct aatttcacaa 10740
tataaattcc cttctttgtt cttctgaata aaaactatga ttatttcttt taattttaat 10800
tttatttact tattttacgt gtgggtgttt tgcctgcatg tgtgtctgtg cgccaaatca 10860
gtgtcttgtt tctgtggaga cagaaaaggg catcagatcc cccagaactg gagttacaga 10920
tggtttggtt ttttttttttg ttttttgttt tttgtttttt ccattttttа ttaggtattt 10980
agctcattta catttccaat gctataccaa aagtccccca tacccaccca cccccactcc 11040
cctacccacc cactcccccct ttttggccct ggcgttcccc tgtactgggg catataaagt 11100
ttgcaagtcc aatgggcctc tctttccagt gatggccaac taggccatct tttgatacat 11160
atgcagctag agacaagagc tccgggggggt actggttagt tcatattgtt gttccaccta 11220
tagggttgca gttcccttta gttccttggg tgctttctct agttcctcca ttgggggtcc 11280
tgtggtccat tcaatagctg actgtgagca tccacttttg tgtttgctag gccccggcat 11340
agtctcacaa gagacagcta tatctgggtc ctttcagcaa aatcttgcta gtgtatgcaa 11400
tggtgtcagc gtttggaagc tgattatggg acggatctct ggatatggca atcactagat 11460
ggtccatcat ttcgtcacac ttctaaattt tgtctctgta actcctccca tgggtgtttt 11520
gtttcctatt ctaaggaggg gcaaagtgtc catactttgg tcttcgttct tcttgagttt 11580
aatgtgttta gcaaattgta tcttatatct tgggtatcct aagtttctgg gctaatatcc 11640
acttatcagt gagtacatgt tgtgagagtt cctttgtgat tgggttacct cactcaggat 11700
gatgccctcc aggtccatcc atttgcctag gaatttcata aattcattct ttttaatagc 11760
tgagtagtac cccattgtgt aaatgtacca cattttctgt atccattcct ctgttgaggg 11820
gcatctgggt tctttccagc ttctggctat tataaataag gctgctatga acatagtgga 11880
gcatctgtcc ttcttaccag ttgggacatc ttctggatat atgcccagaa gaggtattgc 11940
tggatcttcc ggtagtacta tgtccaattt tctgaggaac cgccagactc atttccagag 12000
tggttgtaca agcctgcaat cccaccaaca atggaggagc gttcctcttt ctccacatcc 12060
tcgccagcat ctgctgtcac ctaaattttt gatcttagcc attctgactg gtgtgaggtg 12120
gaatctcagg gttgttttga tttgcatttc cctgatgatt aaggatgttg aacatttttt 12180
caggtgcttc tctgccattc ggtattcctt gggtgagaaa tctttgttca gttctgagcc 12240
ccatttttta gtaaatctca aagcacacat tgcacctcac acaataataa tgggagactt 12300
caacacacca ctttcaccaa tggacagatc atggaaacag aaactaaaca gggacacagt 12360
gaaactaaca gaaattatga aacaaatgga tctgacagat atctacagaa cattttatcc 12420
taaaacaaaa ggatatacct ttttctcagc acctcatggt accttctcca aaattgacca 12480
cataataggt cacaaaacag gcctcaacag atacaaaaat attgaaattg tcccatgcat 12540
cctatcagat caccatgcac taaggctgat cttcaataac aaaataaata atagaaagcc 12600
aacattcacg tggaaactga acaacactct tctcaatgat accttggtca aggaaggaat 12660
aaagaaagaa attaaggact tcttagagtt caatgaaaat aaagccactt catacccaaa 12720
cttatgggac acaatgaaag catttctaag aggaaaactc atagctctga gtgcctccaa 12780

aaagaaacta gagagagcat acattagcag cttgacaaca cacctaaaag ctctagaaca 12840
aaaggaagca aattcaccca agaggagtag gaaataatca aactcggggc gaaatcaacc 12900
aagtggaaac aagaagaact attcagagaa tcaaccaatc gaggagctgg ttctttgaga 12960
aaatcaacaa gatagacaaa cccttagcca gactcactag agggcacagg gaaagcattc 13020
taattaacaa aatcagaaat gaaaagggag acataacaac agatcctgaa gaaatccaaa 13080
acaccatcag atccttctac aaaaggctat actcaacaaa actggagaac ctggatgaaa 13140
tggagaagtt tctttacatt ttaaagtgag gtagtggtag ttgttttggt ttatttttt 13200
ttttttttt tttttatctc taatgttgtt gcccaattag aggaggatat tgaaggaaat 13260
tcgggtgctg aggtggatct ttgggcaagt gtaaaagcct tctcatttga tagtgtaatt 13320
gtttaaagag ttttgtagat aaaaggctct ccttttgatt gaccattttc acaatatgaa 13380
attcaactaa agtctttctg tcaagtcatc aacatcaaga aaaacacaat ttccttagta 13440
tacaggtgta tcaaaagttt gtctacttgt acttcaaata catttcaaga tgtaaatttg 13500
agacttaaat ttttaaaaag agaaaaagat atcttagaga ctatagagtt ggctcagagt 13560
aaagagcatg ttctggtttt tagaggaccc aggttcaatt cccagcagct ccagaggggc 13620
tgcttgccac aggctcctgt acacaccatt tatacattcc catagtcaga cacgtgcatg 13680
tacacataat ttaaaacata atgaatcttt tctaaaagat agatcttatt ttatttttta 13740
aaatggttac cataaaagct ttataaatca agatagatat acaagaaaaa tatatataaa 13800
cttagaaata tattctaaga taaaagtaca tgtaatacac acacatttag tttgcttact 13860
ctccagggat aatgatgaat actcaatctt acattgaaac agcctctgat agctcaatct 13920
tggctagatc aaataggttt taatgcagta agctttactg catataaaga ctcactaact 13980
tattatcaca aatggccaat tcaagaaaat ataataatgc taaacacatt caccaatatt 14040
ttgttttaaa atatataaaa cttaacagaa atacaaagat gagttgattt ttattgctac 14100
gggttaattt tatatacctt tctcagaaaa tgatactata aaacagacca gaagttcagt 14160
aaaattacag aaaatttaag ccacacagct attatctgtt ctaataagct tatctaatat 14220
acagcattta cagctagaga atacaaagca tgcttcttaa atataaggta cagttattat 14280
tttctatgca aagtacagtg atttttaaat atttaaaaa taattatgaa aatggtattc 14340
tggaaaataa aatacaaatg aggaatttaa ccattagctt tgccctttc agtttattaa 14400
gactttgcac tcagtccaag acaaaaagtc ctacaagtgt tagtaaactg agacctggaa 14460
cacactaaag taaatctagc acatggccca ggctcctttg ctagaaattt ggctactgtc 14520
agcttaagtg aatagcactg tgtcacagac cataaggcac actagtcact agctgtgacc 14580
ccagccacac agattgtgtt gtaagaagct gacatttctg ttgtctaatt gctgcagtga 14640
agactttggg tagtgcaccg agtaagagga gagcacaaac atccttgctt tacttttgaa 14700
atcataggaa atgctctcag tttgtcctca ttttagaaga atggtggcca taaatttgtt 14760
gtacagagcc attattactt tcaggtgtga tgtacctgtt cctaatgcct gcaggacttt 14820
tatgcttata aactgccttt tctggaatca agatggttat aatgtttcta accttgtatg 14880
tttataacat atattatatt attgatttac atatgtcatg gtgaccctgc tcttcagggt 14940
gaagctcact tgatcacaat gtatgatctt cttaatgtgt cccagaattc agcttaaaag 15000
tatttgattg agaacttttg catctgtgtt aatcaaataa attgatctat agttaaaaaa 15060
aaaaaagaaa agaagaagaa gctgacattt ctgccagctt cagagcacct tgtgcccaac 15120
ccttagaagc aaaggctctg ctctgctgtc tgactgtgca catgctgtaa taaacgaatg 15180
cccatcttcc tacaggaaac agttgcttat ttaataaata cttagaacat cactaggagt 15240
ccatttcatg agtttatttt ctgaaaacct tggatgcgaa ctgactacac aagacgttcc 15300
tttaaatttg gtctccatat tcatttaaca gattgggatc ttgaaatctt ttgcaaaaga 15360
agaaatggaa atccctaatc ctggggcact gtaattataa aaatagaata tacaggcata 15420
tgaaaaaaat gctcacaggc agcacaaatg ataaaaagat aattttaaaa ataaaaacag 15480
ttagttgata ccctcctttg ttttgcaagc actgtaacaa ctaagataaa gatttaaacc 15540
tgaattcatt tcctcctctg tgattagaaa ttttaaaaat acataatttg ccctgctata 15600
ttttttctag tcattagttg agatataatt tcagaagatt aaaattgggc ttttacagcc 15660
cctatcaaag caatattatc ttgccagttc ctacctccct gtttagtaaa cagagggttg 15720
tgtcaactgg catagactta acttatttaa tgtacttatt atatgtccat gtggttaact 15780
gggttctccc tttcatccca aagctctgct gcagaaagct ggctgtagcc atgatgcaca 15840
cactttgggt ctttttgcca gtattggggc cacagaacaa agagagtcag aggcctgcac 15900
actgttcagc atgcatggca gctctgtgag aagctgctgg cacatgtatt actgtgcttc 15960
aacacacagg aaatacttat aaatactgat tgtttttaaa aaagaaaatg aaaccattca 16020
acttatttca aatatcataa atgttataca atcagatgct tagaccataa cttaattact 16080
aattgcaaaa agtagtttaa gaaaaattca ttagggttgg aggtaggggc agtgcaaggg 16140
gggattggga ggaggagaaa gctgtgattg agatttaaag tgaataaata gattaataga 16200
aaaaatatca ataacaacaa caaaaataga tttggaaatt ttatttacat ttcttattat 16260
acaattgcta agttaacaaa aattaaggtt tagccataac atgtctcctc ttcttccacc 16320
caaagagcaa ttagatggaa ggcacatcag gggcacttag tgtggtcgtc taatgtaccg 16380
tgatgagtgt gactatccca gctctccgtg actgtttact ccatcacagc tttttacaca 16440
gagtcccaaa tgtgcccttc tttaggcttt gggatttcta ctttgctact tttctgaaac 16500
tgtgcaagag ccacctaatt ctggaatgtg tcttgtgctg tcctggttcc ctacaagtga 16560

gcacagggtt gtttagaagc tgttactaca agggaccaca tcacaaaaaa gaagagaatt 16620
tctttaacag aagaaacctt gataccgaaa accgtctgga gaaaagtggg caggcagctg 16680
gtcctcatgt gcctgctccc tgtgaacaca ctcttctgct agctgacttc atctgttgac 16740
agtctggtcc cataaccttt gctcagtact tcaagcacaa ctggagacag ttaaagatgg 16800
caatggcttg ctgtcccctg catcaaatct aggtccactt ggacctctat ccgctctcac 16860
actgtgagca cccacaccct gatattttcc ccttaacagt ctaaacctaa atctaaaaag 16920
accttaggtg cttttgtgaa aagtctgtct caagacttga cccctcctgg gaagagtatc 16980
actagggagg ttcattcctt ttagagaaga atgttcctgt gcctgttgcc tgctttacaa 17040
acaacaataa atgaattgtt ttgttatcat actgcctcgg cagtgtcaaa aaagcaggtc 17100
atctcgttgc actatgtggg aaaacactgg gtatatagca tcctctgctc catcagcatc 17160
ttgaaagaaa ccacattccc ttgtgctcct accaccatga gcagtgtctt ttaccatgcc 17220
tggaagctat tcccagtgcc ctctcacaag ctccattgac acaggataaa aaggtgggcc 17280
cccaggctct tgtagcatag tttacagaat ggggaatcaa gctttccagt tagtcttaag 17340
tatctcagca ctaccttata ctgcctacaa gagggaggat cactggggtc aaatatatgt 17400
gtatctcagc ctctgcattg tcatattctt atctagcagt tcatccagta caaatttaaa 17460
agatactttt aaaagttgac ccatactaaa catgtacttt cctcttgtca ttattctcta 17520
aacaatgcaa ccaaataact atttacaaag catttatatc atattaggtt ttataattac 17580
ctagagatga ttttaaatga ggccatgaat agattgtgtg cagatacagc agtactgcat 17640
acaatatatg tgttcaaata ctggggtact ttataagtgg aacttgagca tccagacccc 17700
agggaattct gagagtgggc tgtattctca agccttcaaa gtcagtgtgg tagcctgacg 17760
gctgtcttag tagctgtcca ctcctcctgg cggtttcatc aggagttatc tttttttttct 17820
tgacatttag ttattggcct tgtcatgatt ctcccatatg ggctatccag gcccttgaca 17880
tttatgtatc aggcagaatg cctgatttga accctctatg atctcttaac ctgcaggcta 17940
ctcttctccc tggcccatct acttccatga agtgaatctt aaaatgttat gattcaattg 18000
gatgcttgtc ttaaaaattg aatactgtgc taagaggcaa ctcacaccta attaggaaag 18060
ttttatctgt catctgttga aaatgtgccg tacatatctt taaaaaatga gacttacacg 18120
tactatttaa tttcatcaga aactatgtat aaaatctgtt ctttgtgttg aaaagggaac 18180
cttattcact cttcaataga ttttggaaga gaaattttcc acttgaggga aattttccgc 18240
tcagatacac ttctggactt tgtctctgac atcttcatga tgctctgtgc tttgaatgct 18300
gtttgttcct cctgtgcctc ttccatggga agtcatttct aatccccatt ttgaaacact 18360
gatttcaccc ccccccctc cttgaagtct cttatgtcag agggcattct gacctcaggc 18420
agatcacagg caactcaagt actcaattgc agacaaactt tattttggta gcagggccct 18480
tgatgaatct gggaggagca atggaaagtt ctgtaggtat gtcagcccag aaggaaatgc 18540
atgtcttctc cattcatcta ggaccctggt gatggaacaa ctctaactgt ccttgatgga 18600
tgatcatttt tttttaaact taattgtacc ttgactcaaa atatccaaat aactgaatag 18660
ccacacaagg gccctggcat gagagtgggc ttctgggata tatgccaatt tgctcctgtt 18720
ctaaggagag gctataagtg gaaagattaa gtggagagac agccccaccc ctctaagtct 18780
tattcctatg ttccattcaa actgtgctag cctgatttct gtggggtcca ggctttggaa 18840
attctccttt tttcatggat gtctcagtgc accttgttaa accaagtttg gcccctggcc 18900
tgttcatctg tttccagctc tactgattgg ttccagtttc cttgctcatt aaagccaaga 18960
taatctggca cccagtagtc aggcatcctc aagcatctgg caccaaggtg aacctggaag 19020
ccagtgggga ggcccagtga cccaacactc ccattgcacg gtaagagaga ggcgcagtgc 19080
gccaatgcga gcatgggata ggagcagaag aatgggagaa gaatgggctt cccaccttgt 19140
ctttgcctct cctgcctctg gaagtccaag cgtgtctgtg attccctgaa attctttcct 19200
cagcaataaa atagtggttt aaactcgaca tcattgcaag tttctaccag ttgcaaattg 19260
ctaagtgtat taaaacctaa aagaaataag ccccctttat acctgttttt gcaaaaattt 19320
gatctaactt taactatact agcagtagca tattctactg atgctttcta caaactacaa 19380
gatgagcatt gtgcaagcct gcaattccag tgcacaggag gtggaggaaa ggaaagacca 19440
gcctggatta ccatcacaat ctgtctcaaa acaaaacaaa acaaaacaaa cagaagcagt 19500
aatatgggtg atgtggtaaa ggtactgtca tgcctgatga cctgagttta atccttagaa 19560
cccatgcatg ttggaaggaa ttcacttcct gcaaatttcc ctttgaccta tataggtgtg 19620
ccatagtaca cctgagtaca agagttcaca cccacaacaa atacatcaag aaagaaacat 19680
ttttaaagaa aatagcagca gctactaaaa caaaatgaaa aagattaaga gttcctattc 19740
caaagcaaaa ggttagctct ctgagtccca tattctctaa tctctgaaac aagaatgata 19800
atatctaact cagaattgct tgggaaatta aatttaaaaa tccctgggca cctagaactg 19860
tgcaatacaa atagtgagtg tttgatgaat ataattaatg ttaatacaaa agtggaaaga 19920
ttaaacctaa caaagagttg tactacagaa acaaacagca gctgctgttc agaagctggg 19980
aggtaaacag aagagaagat ccagaatcac ctcatgtgtg catgtgtatg tgagcatgtg 20040
tatgtgtgtg tggttatatg tgagcatgtg tatgtgtgtg tgtgtatatg tgagcatgtg 20100
tatgtgtgtg tgcttatatg tgagcatgtg tatgtgtgtg tgcttatatg tgagcatgta 20160
tatgtgtgtg tgcttatatg tgagcatgtg catgtgtata tgtgagcatg tgtatgtgag 20220
catgtgtata tgtgagcatg tgtatgtgtg tgtgcttata tgtgagcatg tgtatgtgtg 20280
catgtgtatg tgagtatgtg tatgtgtgtg tgcttatatg tgagcatgtg tatgtgtgtg 20340

tgtgtatatg tgagcatgtg tatgtgtgtg tgcttatatg tgagcatgtg tatgtgtgtg 20400
catgtgtatg tgtgcatgcc tatatgtgag catgtgtatg tgtgtgtgct tatatgtaag 20460
catgtgtatg tgtgcatgtg tatatgtgag catgtgtatg tgtgtgtgta ttgtgcatgt 20520
gtatgtgagc atgtgtatgt gtgtgtgctt atatgtgagc atgtgtatgt gagcatgtgt 20580
atatgtgagc atgtgtgtgt gtgtgtgtat tgtgcatgtg tatgtatgca tgtgtaggca 20640
cctagttttc aactcactgc ttcttcggtg tagtgaaaaa taagtagtgc tagatcaagt 20700
ggggagcttg tatagaagaa aagtggaatt tgatccatgc ttccactcta cataaaaatg 20760
agctccatgt gactcatata tctacatgag aaaagcaaat tacaccgcat caagaagata 20820
gcagaataat actctcacag ccttggggga gcccaagatt tcttaaacca ggagtgaaaa 20880
ccatggtcct taatagatta ggtctgccgg gggtgggggg gggggtggca cacgccttta 20940
atctcagcac ttgggaggca gaggcaggca gatttctgag ttcgaggcca gcctggtcta 21000
caaagtgagt tccaggacag ccagggctat acagagaacc cctgtctcaa aaaacaaaaa 21060
taaacaaaac aacaacaaca ataaaaatga ttaggtctgg tgtggtagtg catgccttta 21120
atcctagccc tgggagacca aggcaaccag gtccccagga aacccccatc tcaaaaaaaa 21180
gaaaaaaaaa agatttataa actagactgc ctattgctgt gataaaatac catagcaaag 21240
gtaactttta gaagaaaggg tttgtcatgc acacatgtgt gcacatacat acacacacac 21300
acacacacat acacacagag agaggggga agagagagag agaatagttg ctatgctatt 21360
cctgtagcag atttatatcc tttgcattta taaattgagt ataatttttt gtctttgtct 21420
acttctgaaa agccagaaaa tggtttctcc ctcatgcaaa gaaatgaatg aatgagtaaa 21480
attgagtaat tagactgaaa agagagctat ttaacattac tagaaatagc ccctcgcccc 21540
aaagagtaat gagagccctt ccaagttttt atcactaaga tataaagtga tgaacttttg 21600
cctctcagaa tttgaagtga gaaacaaaaa ttttaatttc aagtgaaagg aagactttat 21660
taatcagtag ataattacag ttaacatata gtacctagac atttaaatat acatatattc 21720
tttgagatat ataaaattat gtgtctttta aattttgctt ttagaaacta ataattatat 21780
attcttaata gaaaaaaata gaaaaaaaaa tctacaaaag gctgagtgtg atggagcatg 21840
cctgtaatcc caggcctttg tgagtcttga ggtaggagga tcaggaattc cagagcagac 21900
ttcgctacat ggaaagttgg gtttgaggtc agcttgagac cttgtataag aaacaacagc 21960
acaaaaaact gggtgcagag agataaaaga tggagggaga gatgaaagga agaaggaagg 22020
aaggatgagt cagtctataa gtgggcatga taatgtgcta aaattctgta tcaaacctac 22080
acgtgggcat gtcgagctct ggagaagagc tatcagcagg aatcatacag tgctcactgt 22140
cccacaggag tcaagcaaga ctagggctct gggacagcca taccaaggca cctgagaagc 22200
atttgaaagt gctgggagca agtatagtgg gcttacacaa actagagtct cgtttctaca 22260
ttggaaacag ttgtgcttaa aaagtatatg cccagtaccc gagtcacctt tacagagcct 22320
gctggccacg tgtcttagtt gccacaatcc accaagagaa ttatcaagta tgctggctcc 22380
cattccatga cctttggtcc aggcttgcag ggaacagtgt gtgtactgtg gactcagtta 22440
tatggaagca agtggggata gatgcagtat tttgtcagtg aatttaaaaa ataatctcaa 22500
ccttaaatga gatttatcat ggaaaaatta gaatttgttt ttaataaatg tggaccacaa 22560
agtcaggaat aatcctattt ttctaaggtc caaaagtcat cactggggac attgtcattc 22620
tgttccaaac tataactgtc ttttgtctca ttggcttctc tttcttttaa aggttgtacc 22680
taatttcgct taactgtatt ttgtccttct caattttttt tcctttcttt ggctttaacc 22740
ttgcaatttt ggggggtgat ggagagtctt gaacatgcac aagagccagc tgacagaata 22800
ttataaaact ctgtgttgct tctgcagtcc ttacaccata gccagtctgc cccatttcca 22860
ccctagctct gcaccctgcc ctagctcctg ttactttgac tttctcagtg tgtacccacc 22920
ttcaagggtc cttccccagc cctgagcttc cctgtcttgg tggtgaggaa tgatcagacg 22980
tgtgtgctta gtgctctgtc ccaggcctga ctggctgacc caggctttcc cctctcactc 23040
tggagatgcc tggaaattcc cagacattgc ctgtgccagc ctcacatgtt cagctcctct 23100
ttctccttcc tgttaatgaa ggagcccatt gctcaaatca tttggaaggg gaaaagtgga 23160
acttactacc tgggtgttct tcttccatgc tgttcgtata aatttaaact gaggttcctg 23220
agaattagat tgaacatgac gaaaagtgct gtgtgggcag cttcgctgag tacttgcaga 23280
ctgatagagc cttcgcaaca atgaaggagg gaggctcttt acgctgccta gctccagaag 23340
gtaagctcac cagttaagga atttgtatct aaagggcctc tttaaccctt tgatgggtag 23400
caaagaaaaa aaaacagaaa gaagaaaaga aaatctacaa accattccag atctggccct 23460
gaggggcccc tgagtgtttg tgccagacag caccctcctt gtgcgcgcag accttgcatt 23520
gcattcagat ttatgtgtcc tggaattttt cattacttca actccttcta agtttaagaa 23580
atagcctcaa atcctcacca cgtcacggcc atggagtgct gccatggcat gccatcccgg 23640
tggtcaactt ttgtgtgagg agattacata acaaaatacc acatggaact ggaattcatc 23700
agtttgaatt gtccttctta cctagcaact ccgtcagtgt ttccaccaaa gtcagcggga 23760
ctttgcttgt accagttaaa agaggaagtt tattgtgtga ccacaaggtg atataagccc 23820
aattgttttt caggtgttta gtctgtctca gaacttcaga agaaccaagc aaggccaggg 23880
cctgcatcct ggctgcatga gttacccaaa gggaagccct ttctgttgcc cctttggtca 23940
gcttatcatt cctgagctct caaaccagat ttgtctcttt cttcaagctt ataggttggc 24000
aacactggtc atgaggtcaa gagggtaatc cccaagagca gtatgttccc atcacaggtt 24060
ggctaggagc ccatctaagt ccagcatctg ctgtttcggg gagaaaggga gtcttgtagg 24120

taatgatgct ccatcctctg cctgtactta ctgcattttt gacttgccaa acagcttatt 24180
tctttgccta gctacaccat tattcagaga tcaagacctt ctttggggtt cctgtttgca 24240
gtttagtatc gacataaacc cctcattctg gtatgcagaa tgaggccagc agccaaatga 24300
gaatgtgaac ctggtatatt ccttaaggtc cgtttgtgtc tttccattct ccggcggctt 24360
cccatcttag ttgaaataaa acctacgtgc ttcatcctga cccaacatgc ctactgttag 24420
gcccatctac ctcactagga tcctacttca gtttttcccc tcccttcctg ccttctcttt 24480
gtttcttagg ctcctcaagc ttgctctgct cctagccctt tgttctggat atgccctgcc 24540
aaccattcat tatttgacat agtccaatat accttgcaga tttctgtgtg ttcttcagag 24600
aagccatcat aactaaactg agacatgccg agcattctct cccatgttgt tactttaccc 24660
aaagtccttt ttactgtcct aagtagacat cttaatctcg ctatttactc acttgccatt 24720
tagtctctct acactagaac agaagctcca tagaaaggac cttgcctgtc cttctgcatg 24780
gatatgcccc aggccccgga gaagcttgac acatacatgg taggagcttt cctagcattt 24840
gtctgatggc tgagtgagtg gcggtgctgg tcaagagcgt gctggagaga ctgctaggac 24900
tatgatataa ttcagaacca agctatgtgc tgtctcactt gtaggagagt agttctagaa 24960
gccctgggct gttggcacag ccacagctgt tgctagcctt tgcccaaccc tgttctactc 25020
tttctcttat acagacagat tcttgtcccc taaggacatg ggcttgttct gagcagccta 25080
taagctggag ctagagcaat aaataaaaat cctagggaaa tgttttggct ttgaaaggag 25140
tgggagatgc atacttgcaa tttttatctg aggatgaagt agactacact gagaagtcct 25200
gactttgaag tcacctaaag ctttcccgct cattcatttg atgtgaaaca ctggctataa 25260
gccttttctt tgtcctttaa gctgattaca gggtggggac ataactgata acgagcgtgt 25320
ggtaactgat gctgggaaat gggtaataag aagctctagg aaggcacaga aggggatgac 25380
ggcacaactt tgcctaggtt ctcaggacag tcctgccaga gaaagccctc tcttaccctt 25440
ccattgagtg tgagggaaaa catgagctgt caggaatagg cgtggaagag tgtacacaca 25500
cacacacaca cacacacaca cacacacaca caggatgggg tggggaggag aggaggagct 25560
ggagttttgg gcttgggaga gacaggcatg aagactgtta gtttcaaatt agtcacctca 25620
ctgtgagaag atagcataga gagaagagaa gaggagtcaa agcggtggga ctctggtgag 25680
ggatgggcag gcctggattt caaaaagagc actgtcttct gtgtgaagga caggtttgtg 25740
cagtggcagg gagcagtaag gaacttggtc agtcttcctt aaaggaaatg atggtcattc 25800
tagtaaagtg gggatgggtg gggaagaggt ctgggcaaac tggagaactt cagaaaatag 25860
agtgcggtat gactggtcag cagcggcatc ctgggtttcc tctgatctgc tccgtgaagg 25920
tgcctttgta gctttagtga atttggagag gacacaaatc ctgtttattg tagcagatac 25980
tattgtttct gtgcagagtg tcctgtgcca ccaaggccct ttgcagtaat ggtgcaggca 26040
cactcaagtg acccaggtct ggaagggcct atttttgccc taactaagtc aagactgcca 26100
atgcctccat ttctcccatc cctgcctggg cagtcctcga tgctggccaa gcctctggta 26160
gttaagacaa gctctctgct tccagctaag gctgactgtc agctagagat ttagaaagga 26220
actgctgggg tttccaggac ttattcttct aattaaagag aactggagtt aatggtttag 26280
tggttgttcc ataatcaggc cctgctacaa gtggttaagg agcttggcag tgagaaccaa 26340
aagagccttc agggacaggg gtgtggctgt gaacaaggct aggaaaagga cttctgcatc 26400
caaagctaag aatgtggctt cccttgagtc atggatgata gggaggtttt tgagttgtgg 26460
cccattgaga cagaaaatta ggctgtttca tcttgtcctg gaagtgactg tggatggggg 26520
tggtggatgt gggggagtgg agggggggata aaaggaacaa aagcttggga gtcaagctgc 26580
cttgaaattg gggtttatca catcctggct gggccatgtt ggaccggtga ttagcagcct 26640
tccctaccct caggtgattt atccttgcaa tctgttgggt gtggttattc ttaatgttag 26700
attgtactca gacaccctgg cacagacata tattttaaaa gtggtcattc cttctcttct 26760
gattagcatt tgaagggaga tgaatctcat gcctgattag cagttctatg aacatcatca 26820
ccaatattat gttcatgtag ttgtcataga ttatgaaata cttgactatt tttacatcag 26880
tgagacttca tctcactccc ataggctttt gtccactagc ctcagtgtat ctactaattt 26940
cattaggccc agttctcctt aaaagctgaa tttccatgtg tggatgtcta atggtggcat 27000
caaccagagg ctttattctc tttatcatgg gtttattcaa gaaagccctt cactgaggct 27060
agagagatgg ctcaccaatt aaaaggacat gtgttctttc aggactcact caggaggtgc 27120
acaactgctt tatctctggc gctagagcat ctcctggcct tcataagctc tccactcatg 27180
tacacaaacg ctcacattca ctctgccaaa aaaagataag taaataaaaa tgacatcttt 27240
taaaaatgaa aaaaaaagcc ctttctcata agtagaatcc ttgagaacag agcaagtgac 27300
caccaggagg atgccacacc catgaggata ggacaaggac cctgttgaga agtggttgcc 27360
ctagctgcac aactggattt gaaaaggtgg tttctaagcc ctggctcgaa tctattagta 27420
ttttacacaa gtgaagagat tctggtattc tctttgactc tttcaaagga atgtttatat 27480
ccctaagagc tttgcagcct tggtaaaagt gtgggacagg catgaatggc cttgggaaaa 27540
atctcactgc tcctcaaaac tcatgggagt ccccctttgcc ccactagata gaaaactatt 27600
tttttttatt gtaaggagta gttttatatt cttttagtag acattaaagg gagcatttaa 27660
aaccatagca ctagtcctca gtgtcctgaa agccaacgct agcgtgctgg gctctgaggg 27720
ccattgtttt ccttcataga gtaaagcttc agtgccactg tcttaagagc tctgcaagtt 27780
cacattatga aaatatatgt aataaaatat ttatttaggg ttttcataaa aagtgtccaa 27840
agtagagagt aagagagtat cttgtgctgg gttgagaggc tctgcaggga attcagaatg 27900

aaattcaagt ccctcaaata tattttggtt ggcctccact atgttttatc tcctgtaatg 27960
aactctttgt cagtttgtca attttcacgg agttcacaaa gttcatgtat agtaacacag 28020
agccaggttt aaaattatgg tttatatcat gatgtaatag tcatctctct tttccttcag 28080
tcaatattta cctgtgaggc ccatatatta tatcctgatt tcaaaagaag acccttttatt 28140
ttaccttctt taagtgttgg ttttaaatac ttaaaatatc agaatttaga agctgagctg 28200
tctgagactt ctgcctgtga tcgcttaaag tgcctagagt gtcaggcatc ctgggtgggt 28260
tccttgcacc ttgacccagc aacatagcta catgcctgtc agagtgaggc tgctcaactt 28320
agagccaggc tgctctatcc cagctcccca gacagctttc tcctatgaaa gataaaccca 28380
ttgtaccacc ccatagcagc catcagccag ctgccttaga cttgacttct cctttgtaaa 28440
cgctataagg ctgtacagaa aaacccaagg agcactcatg ggaggatttc tgtgtgtcag 28500
aacaagtgaa gagtaaattc tatccctttt taaaaattgc ttctttttgc acccattttt 28560
ttaaagcaaa ggtaagaatt agccctagtg atcgaggaat aggaaagaag taaaagctac 28620
aaatgttcca cgtcaactat ctggtgggcc agggacatgg tggcaaaggc tcctgccccc 28680
aggtctgtga tctgagttcc accttcaggg ttcacatggt gaaaagaaaa aaaaatgctt 28740
tcttcaagtt ttcttctaac attcatatgt acaccatgac atgctcaccc cctccacaca 28800
catacccatg catacacgta catacgcatg catataaata agaatgtaat ttttaaaaga 28860
aaaattaaaa atgtctgatg ttttaggact ggtcacacag gtcaccaaag gagcaaatgg 28920
gggtatgcta ataagctcct tgatatcaga tgtgactctc atgagtcaga accgaaagag 28980
gattcattag ctcagaaacg tccaagtaga caaatagact aggttcaacc tcagctggat 29040
cctggagttc aaatgaggtc accttggatt ttcccctatt tcttagactt gttatttttc 29100
tatgttggtt tgagtatgca catgaaggta gttcctggca acggtagtgt tatactgttc 29160
ttcatttctg agttcacagg agagaccctc taggatgaag tccatgttgt cccctaaaaa 29220
caggctctga aaaaaaaaat ctatttatgt catatgccca tgccaagaat agtcactgcc 29280
aacaggaatg gggtgtaagg aattgtgtca ggtgcatgct cagtttaagt accttaaacc 29340
ctgtgcttgt atctccaatg tatctttatt tctctatgtt aaatgcctat tttatgagca 29400
tgttcttttt agatactgtc cattttgagt atttccataa tcacatacat aagaatatct 29460
atgtatgtat tatacatata tatatcaaca tgtatgtata tggcatacca tatttaaagt 29520
tgattaacag gacattcaag ggtaaatctt aagtttataa actacttatc ctatggcctt 29580
aatggacagt cccactagcc tggccactac ttctttggtg gcccttagaa ggattggact 29640
gttggaagaa aagaaggaag gaaggaagga aggaaggaag gaaggaagga aggaaggaag 29700
gaaggaagga aggaagggag gggaagggag gggaggaaag ggaaagggga gagaaggcaa 29760
ggcaaggcaa ggcaggagag aggaacaagc agactattaa ttctacacta ggcctgtctt 29820
ttgcaaatgt ggtgatggat ttacccaaag atgagaagcc tttagaaatg ggagatactt 29880
gtgaaaacgg tactctcatt attcacaatg gaatccttgc cgtctgtttg gtgtggatga 29940
ggaaagagaa cagcatgcat cacagcagct agaagtagct ggaaagatta gaatagtgac 30000
ccacgcttca gggatgagcc tgtaggtatg atacacaccc taggaaagga tgcccaggga 30060
attctgctga ccttccaacg aagctgatac cccttctcat ctgcttacag gcaccttcga 30120
agtgggcgtc cacatcgccg atgtgagtta ctttgttcct gagggatcct ctttggataa 30180
agtagctgct gagagagcca caagtgtcta cttggtccag aaggtacaaa tcagctttga 30240
gtttctagac tttactaacc acttagtgtt ctttgttttt aatttgtaaa gaacatgcct 30300
tttctgaatg ttttctcaga tctagtagtg tctaaattat gaacttgatc ctgggaatat 30360
gcttgccttt tgctactgca caatttcttg aaagaagcca aggctttaat cccaagcttc 30420
atcttcagag tatccttgtg atattagtag ctgcaacagt ggtcagcttc agaatgaaat 30480
gaggggaaat gcttactttc aaactattgc tccaaagaag gacctgtgag acaccccaca 30540
ccaactgctg ggttctatac agtttggttg ggacccagca catccaatct cttgtgttat 30600
ctacgaccac tctcacatta tagtaacaga gtggaatgac aatttactat ctacaagagc 30660
ctttgagaaa tggtttcagc ccttgttcta aacgtgggca ccaatcctga cctacacttt 30720
acaggtagca cacagagtcc ccatgatagc ttttgctgtt agatttccct cacctcagct 30780
atgaaaggaa gaaattctaa cccctctggg gaagaagact cagaaagtaa actatctgcc 30840
atgtgaacat aaggacctga attcagatcc tcagcaccca catgaagctg gcatgatgac 30900
atgtgtctgc gatactggca tgagtgagag tggagggggc cagaccccag gactcactga 30960
gcagcaagtc tagccaagca gtgagtgtgg gctttggtga aagcctgtct caaaaagtaa 31020
aacagagcat gatagaggaa gattctgcct ttgatcttta cacacacgtg tacacacaca 31080
tacacacata cacacacaca cacacacaca cacacacaca cacacacaca cacacacaca 31140
cacactcaga ggcaggtgga gaaggagata tatctattcc atcctatgta actggtacat 31200
ccctacaagt aactatgaga acccatccct ttaatgtgtg tttaccaagc accaagtgtc 31260
tactaggcct tgcagtaggc ctgaagataa ataaaaatac acatgtgact tatctctatc 31320
ctccatggtg gttcatgagt tcttccagcc tttttgttct ctgacaatct gctcacctgc 31380
tcattttggc tcatcatttt ttgggctgtc ttgacattca tttcctcttt gctcccatga 31440
actgaatggc ttgaaccttc cctcccaaat gccatgttct acaacatgac ttttggtatt 31500
taatcatgac tataccaaag taaaatgtct gcccccactc ctgacaaccc aacccaaagc 31560
attcttgaag ctggatactg cttgcttggc ccagcaatca gggaccagag actagccagg 31620
tgacacacct actccattct tagaatttcc aaatgtcatc actcagggaa ggggtacagc 31680

ttcctagtct caccactaca agctgcctgt gtgcccacac ggttggcaaa aggaacacaa 31740
ggccatgcac tcagcctcac aagcagtgtg ctctcatggt ctgcctgctg cctctccagc 31800
tctctgttta ttctaggtag aatggttact agagtgtcca gctgaagttc tgaggtctct 31860
gcctgcatag ggaaccttgt ggaggattaa aaaggggtcc actaggatct aggttttcac 31920
ataccttgg tcctgaacat ttttatcctg tttataagac aacctctcct ttctcttaag 31980
tcttgctggc ttctcttgct ccctccatac tttgacaaac aagaccttga aaacacatgc 32040
ttttctggct gtcttaactc ctatttcatg atgctcccaa gaaaagttta gttctttggt 32100
aattatgttg tctagatgct gttaaggcag gccatagagg cacagattgt aacaaacaag 32160
agagacactg tctcaagcaa gttggaaggt aaggaccaac caccactcat ggttgtcctc 32220
tgatctccat tacatgcacc atggcatgtg catgcctgca ctcatatata cagaaaatgt 32280
acactcatac tattatgaga gtggccttca ttcaactttg tatctcgttt tggtatctat 32340
actaagcatc ttgaagaaaa aaaaacatta aactcctggg ccccccttct tagcttgacc 32400
cttctgagag tgcagttctg actcttgtac aaatgactcc acttgacctc aggctgaagg 32460
catcccatga gtacttcctg cctgatgctg atgctgccca aacctggctt ttccctggtc 32520
cagacttaga agaaggaaga tgagcttcta tcccttgtag ctacaaaacc tctagtgtag 32580
aaatgggaag taattgcata cacttaaagg ctgtcaagta agtaagtaag tgtgaaatgt 32640
tcttcatttg caagtttaac tctgcccttt gatgagaact ttagacccca ttggagcctc 32700
ttcatctagc gggtggcttt ctcctgtctc acagctgcag tctcctctta tgaccaggaa 32760
ttctgtatca aaattagaaa ccaaaagaat gaaattgaat taataactag tgtttccctt 32820
tctgttccct ttactttggt attgtgacaa tcacagttgg agaatctctt tggtgctggt 32880
ggggtctggt gctaaactgt aaaggtaggg ggctggtgga agaagggctt tgaacctcca 32940
ctgctcagcc ctgcctccag cttggcagga gcttaaggtg ccggcccaca accttggaca 33000
gcaggagctg tgcattctga tgcctttgaa gcactgctct gacctttctt cctactcagc 33060
tttgtttctt aaagggctgt gtccaggaac tttctgctgg tttcacttta ctttgcctat 33120
aaaggtctta aaagcgagtg ggctgccttt ccctctgcat attctctgtt ctctcatttg 33180
gccaaatcat tttttcccaa ctctatcact ccagggaatg ggggtgggag ctccagtaga 33240
tttcccatct atagatgtag agtccaaaga gttttaagat gttccttcct gaccccagca 33300
ggttatcagt ggtgctgttt ggttaatgtc aaactgggag gcaaagggtt gctcaaattc 33360
tgaatttccc aactcttttc ttttcactga gatgtctact tataagtaat ggttagagtc 33420
acaatctaag cttggttttg ggaatgatcc cagagaatag gacaatatac agggaaccag 33480
acttgggtcc agatcgtagc tcactggctt taaatgaaat tcctcttgtt gagatttgac 33540
tcactgtgta aggactcagt aacacaagtt aacaagggaa catagtcaag agaaagataa 33600
attaaataat gtctgtttaa atgttaaaac tcacccttcc ttttgacaaa aattgttctg 33660
ttaggatggg gacaactgtg tatctgaact tgaacctatt ttcagaggct gtgacatctg 33720
ctcagctaat atcttctctg ggaaagaaat acaatttatt tttaagtttt aaggtaatta 33780
gaaaaaaata aataagtgaa ttaagtttta aaagtaaaag aaaacctaaa cagtcgaaat 33840
ctaaacctaa gctttgtgtc tgctggccca gccatgcatg ttattttagg tgtgaaacag 33900
ctcagatgaa agctcgccca taaatctcga ggatatttta ttggtagtgc tttataatag 33960
agatcaaaga ttgggattgg aagcctgtct tcatgtagaa tccaacgagt tttaagatgt 34020
tccttcctga ccccagcagg ttgtcggtgg tgctgtttgg ttaatgtcaa actgggtagc 34080
aaagggttgc tcaaattctg aatccatgga tgtgttgata tgaaaaagga gacccttca 34140
gcagagatgt tggctggcaa agatattatc tatttccttt aagtttcttt agtctatgag 34200
tggggagcta gctgagcatg acttggtgtg aaaacttcca agtcctaagc aaaggagaaa 34260
accctgactt gccatgctgc agatctgggg tgcactgagg gggtgagggg atggttacct 34320
aaggagccag ccagagtgtg aactctcaga cagtaggaga cccccattac ttgtgagtgt 34380
ctggcctgat gtcactgctc atccttcctg ttcctccgca cccagatgat tgattcttcc 34440
cttctgtggc cctttcaact ggtcacaggg ctgtcctggc tcacccactg ctgaacttgg 34500
ccagcctgcc tgctgtggct ttagcagatg tttctgctct ctgaggctca tgttaggttt 34560
tatagccttg ttggtacccc cacccagcag tattgggcag tggtgtactg acctaaatga 34620
ccagttccct caactctccc aagccctggt ccagaatgct tagaaagtca gggttctgtc 34680
atcactcctt gctctacagc cagcctttaa gctatatcca gactgaactt tgggcttagg 34740
tctgaaacat tccccagttc tctgccctca ctgctgccag atctatagtt cttccccact 34800
tagcaggact gagagccgcc agtgtcaggg atgcaaaact gaaagggata ctggtcctgg 34860
tcctgatcag aaaaggttga cacattataa gcacttctag tacactggac tgccttagtt 34920
acagaagtac agagaggaaa gggaggtcat gtctccttgg gttggaagga ctgggggaca 34980
gcttctgcaa gagtcaagaa gatgtcacaa aggccagctt tgaaatgtct cacattttag 35040
gagaatgtct ggatagaaag aaatagtttg gggaccttcc atacagaggt ttaaaaaaaa 35100
aagtatgctc agaggctgga gggatgactt ggcagttaag agtctttact acttctggaa 35160
gaaacccaaa tttggttccc aacacccacc tggcatctca caaccactag ttatctccag 35220
ttccaaagga tcttaccttt cctggcctct ggtggtacac agagctcaca taggtgcaca 35280
tgtgtatgca tgttcacgca cacttacaca cacacacaca cacacacaca cacacacaca 35340
aagagagaga aaataaaggc tttagaaaca ctgtttgagg aacagatgta gtgtgacctt 35400
gctggggtat gaagttggaa agaggcttaa agtggcagac taagcagcat gggcatcctt 35460

caaggtaata ggttatgctc agttttgcaa cagttgagtg gccttccttc taagtagaaa 35520
ctctcttgag tgctctggat aaaggaaaat tcagccagag tcagggctag catatcagta 35580
tcagggtctg ttccacatca ctgccccttg aaactttgag taaatgcccc gacataggca 35640
gagacacttg ttcatagact aaagtattta tcaatgctac agaatcatgc tggacagtca 35700
cctccaatgt cagcaatgcc tatcacagag caaaaaggaa agagaagcaa ggggtgggga 35760
aatggagaag ctgtttctcc aggtactgct gctgcctacg ttgagataaa tacagagggc 35820
agattctccc tagtagttag cttttagtgc atgtgactct tggccactga ttgtggggac 35880
ctaaccctgc tctttctatg ttttgttttt gttgtcatag acttgaggtg ttattgtata 35940
gctcaggatc tccccacctc tgtcatcata tcaaacctat agatctagtc tttagtgaac 36000
acttcctggc ccaaccaaaa gtatctggga cctattcatc aataggagac caaaatccag 36060
ctcacccagc acatggaatc ctgggaaagg gaaaggcaat aggacctgat ataaatagga 36120
ttgcaggtta tcaccagata cgaaagaaga tgcacgggaa gagagacagc tcagtcatta 36180
ggagcacttg ctgcataatc atgaccaaac ctcaacgata tcccagtagc cagatgtcct 36240
tacaaaacac ctgtaactca tgctctggag gatctgatac cttctggtct ctgctcgtgt 36300
tcaggtacac acagctatag ataaccacat acatcatgca ggcgcacaca cacacacaaa 36360
ctctaaaagc aaagaatata ctgaagtctg gagtaaagga aggtgttatt cgcctcagca 36420
acacacatat taaaattagg atgcatatta aaattaggat taatactgcc cttgagaaag 36480
gcttatatgc aaagttgaag agcgtccata ttttaaaaaa taaaaattac tgaggcaaac 36540
tttattttcc tggttttcca ttattttcat gaaatatcta aagctaggta tgaggtttat 36600
taagttcaat tttgtatctt gactctttgt ttgatagttg tttgattggt tgatttggtt 36660
tgcttttatg ttgttgctgc tattgttgtt tgttttagtt ttgagacgaa atgtcatgta 36720
gcccaggccg actttaaact cttcatgtag cccaggctga ccttaaactc ttcatgtagc 36780
tgagggtggc cttgaaccct tgatctcctt tcctctatca cacaaggata agattaaagg 36840
tgcatgctga actttgaaga ctggaagtcc aaatgacata aggccacctc tagtgagggc 36900
ccttttcatc tcttcaaggc agatagtatg gcaatgactg tataaaaaga aaacatcata 36960
tggcatgtca gacggctagg atgaaaggag gagccagtat tagcctcacc tgtcaaagtt 37020
cctactatct gtcaacactg ctctactgag aaacagtctc tgattacaca aacccttgat 37080
gagagaacat tcaaatcatc tctaaattat aacagaagtt ctaccaacaa tgattccatg 37140
aagagctttg ccactggtat aggaaactat agactatatc caaaaaggga aaaccagtgt 37200
ccacatttga acactgtaaa tggagacaaa gaaaatcact tgatcgaggt ttagaatgcc 37260
agaccttaag cacaggcaga ttgggtgtta taggccagga ctgttgctgt cacaaggtaa 37320
ccaatagttc aggaggtgag aggggatggg gaagtagaaa tggcagtgtc ttgtttctta 37380
agtgatttgg ggaagttttg ttgcttattt gttcatttga tggaggataa ggtactgttc 37440
ttatagaaac atcagtacag ggagggtgga aacacacaaa gggaagaaaa caccaggctc 37500
tctattctca tgctgtgttt aaagaattca tgatgttcag attcaggtat cagaacagaa 37560
gagtctagat tccaagaaga ggcagggctc agaatgcaga ggacagaaac caaggagaag 37620
gaggcaggaa gaagaacaga ggacagaagg taagggccaa ccaagaaggg agtacaggaa 37680
aggccagtct tgagtgttca ctggttctgt attttaaaaa caacatgtgg ttatagatta 37740
tataatatat attactttcc atatggtcat atgtacacaa atgaaacgca tggatttcat 37800
gccatcatgc taacattcta agaaccggga tcccatggtg tttgtgcttt caagtcttgg 37860
tttatagaat ctaaaattcc tacaaggaat tttacaagga gtgtgtaact ttgataatta 37920
agagaaaaaa atgaaagctg agaagtataa accattctga gaagcttcaa gtggagcaac 37980
tggagtgtga ctggcagagg aatatagtct ggagttaagg gaagctccac ctttgcactt 38040
ggggaatcga accagatgag cagggagatc actagctaga gctccaggct gaaggcagga 38100
gacacttgcc atgagataac aggaccaggg catccctgaa aagctaggga aaatggctca 38160
agagagtagt tgatggagag tgctagaaaa ggcttaagtc taccttctct gtgtacaaga 38220
gttgagtttt ctgctgagaa agaatgagaa ggtagaagaa ttggaggaga gaagtaatgc 38280
gtgtgaagcc tgggggaaga tgctatcaag gcatggcagg agctgagact gtttgttgat 38340
gcatccctat atagcccagc atgttttcct gccaccttca gtgtttagcc agtagggtcc 38400
caagaacaaa gaaggcacac tgtgagattg gttacatgac ttgcagttag gacagtggag 38460
ttgggcagct ggggaactgt ggtgaaagtc cataataaac agggagggat acaggcaggg 38520
ccaagagaaa actaccaagc cccacggaag cataggcact ggccctatgc tttcggcagc 38580
aggactttct ctacacagag atccttcctg gttatcttgg tactctgcac ctcagtccgg 38640
cccagaatct ctccagagag tgtgacgagc ctcacacggc caatgtgctg catggagtca 38700
ggcagggcat ctttcttcct cctcatctgc ctgggtagag ttttgaaaaa gtggctttaa 38760
agagaatagc cccaccttgc cagtcctctg ccacaggaaa gcctgctgca ctccgggttg 38820
aacaggaacg catgcacagt gacccctgga ggaccagtgg atttatgaga ggctgtgatg 38880
tgccaaacca caaatgtgat cgtaacctct taatttcttc tcctttgaaa ggcagaggcc 38940
taaccaccta tttacaaaac tggatgaaca tgcactgttt cctctgaatt ccatctgatt 39000
ccttacccag aatctagtag aaagtgtatt aaaaggactg tcccttaaaa attaaatgca 39060
tttctgctgc cacagcttct tcatgaaact tgaggtcttt ggcatctgac cagtgggagg 39120
agcaaaacag ttttgataac caggacagct acagggtata ctagtggatt ttttttttcc 39180
agagggttgc caagaaaatc tttcctttct actgaaagta ctaattgcta tgggcatttt 39240

tttgagaaag atgctactat agaatatctg tcagcaagga tttcataaac tgttgggatt 39300
tggtttttt atttgtttgt ttttgttttg ttattgcacg aatgtgtgtg acagacagac 39360
agacagacag acagacagac agacagggag agagagagag agagagagag agagagagag 39420
agagagaaag agagagagag agagagagag cacatagaaa acagcaggat atttatctta 39480
taccaaaagc catccatctg tgcactaata gtgcctgcct gctgtgtgga gtagatagaa 39540
ggacaaagcc agactgactt gcctttgttc ttgggggttc catatcctgg gggcacctaa 39600
caagggatca ggatacaggg tggtcaggac ctttccaagt gctgtagaag agctcggagg 39660
gtggagtaag tagctaattc tttgggactg tcccacagcc tctgtgaaag atcaggggaa 39720
gttatagaac agtacattct ctgcctgggg gagtctggag aagcatggaa atggcaagga 39780
tctgagtgta gaaagatagc caaagtttgc ctgaagcaag gtgtccagaa aggtgttcca 39840
gaaaatggga acaccatgtg cagaagctgg agcagcgagc aggcaggcag gtgaagggct 39900
cgcagcgggt gggcccatgg gctcgagctg tgtgtgccct gcacagggct gaatgcgggc 39960
tgagccaagt ggcacagggc ttggacacct tcagctgatt gttaatgcgc atttcagagc 40020
aatttcgctt tgaataaaac ccatgttcag aatcgttcta gcatgttggg ttatcaagaa 40080
gtgctgggct cagagtctga ctcgaggtcg ctgtccaaag cctttctgat ttccacctgc 40140
tgctacctcc tctgtactgc cctcagctgc ttgatgatct taagacctga gctctacccc 40200
ccttttcatt ctatacataa aattttagcc ctttcttgtt tatgaaaata gatcaagatt 40260
actatgtata aaaaacataa aattatatta tgtataacat agtttataaa tgcataactt 40320
aagagatgcc tttgggacac tgctattaac tgcatttcca cctttatttg gacttcacct 40380
gtttttttcca tcagtgtttt ctgtctcggg gtccagtcta ggcccaagat acaatgactt 40440
tcttttgaca aacactaaag catgatgacc aaagtcatgt tgtgactaaa agtcttataa 40500
ctgaaagtat gatacttcct tgaacactgt ccaattaaaa gcaacaacaa aaataaatat 40560
tgagctctgg actaattgtt gcagccagtt gccacagaac atctggtgtc gtcatctggc 40620
aatgaaaccc agaaaacgtg tgggttttgc tcagcctcaa tgatagtgca ccacagactg 40680
ggtgacttca ccaacagacc tatatagttg ttcccagctt caggtgctag ccagtgtgat 40740
tcctggtgaa aacctacctc tctcatatgt ggctgtgtcc tcatatggcc ttacctctgc 40800
acctccatgg agagagggac tgtgtgtttt tttgtcctct catccttaaa atcagttttg 40860
tgtaactagg tcccaccctt atgacttcat ttaacctttg taatcactta ataaccctgt 40920
cttcaaatac tgttaaactg gagactacag cttcagtata tcaatgggga ggtacaattc 40980
ggttcacagc atagttaaaa ggctgaaatt atataaaaaa ttttaacttt gtaactttgt 41040
cacaaaacag tgtatatgac acaaaaactc tatagtgtgt tggtgtagat gaagacgcag 41100
ttttttttgtt ttgtttgttt tgtttgtttt ttgggggggtt tttgtttgtt tgtttgtttt 41160
tttggttttt tcgagacaga gtttctcagt atagccctgg ctgtcctaga actcactctg 41220
tagaccaggc tggcctcaaa ctcagaaatc cacctgcctc tgcctcccta gtgctaggat 41280
taaaggcgtg cgccaccacg cccagctaca atgctttata aaacaatgga catacaagaa 41340
aatgtaacat attagaacac attttaactt attactaaag ctaatggggt gctgaggcta 41400
cagctggcct agcatgcaca aagccctggg ttaaaccccc agcgcagcat aaaccaggta 41460
tggttgtgca cacctgtaat cccagcactc aggaggtggg gaatcacaag tgcagagtca 41520
tcttcagcaa agccatcctt tgaggcaagc ctaagcaaca caagaccctg tctcaaagca 41580
aacaaacaaa aaccaaaata tcaaagtgtt tgcgtccttt gagctgacgg tattaaaaaa 41640
aaaaaaaaaa aagaaacaga caagagaaaa caccctatag gtggaacaac aatatgaact 41700
aaccagtacc cccagagctc gtgtctccag ctgcatatgt agcagaagat ggcctagttg 41760
gccatcattg ggaagagagg ccccttggtc ttgcaaactt tatatgcccc agtacagggg 41820
aacaccaggg ccaagaaggg ggagtgggta ggcaggggag cagggtgagg ggagggtata 41880
ggggactttc tggatagcat tagaaatgta aatgaagaaa atacctaata aaaaattgaa 41940
aaaagaaaag aagaaaaaga gaaaacttca ataacacttt catatagaag ctgttaccaa 42000
agttttcaag taatcactgg gtgtaaaact tctagaatac tgccaaacac ctattaattt 42060
ctgttaccaa taccagccat gcatcttcaa tttcttcttc tacatcaagc acatgctttc 42120
tatggaaaca gcacattaca gaaacttcac aaagtgagag aaaccatggg gattggtttt 42180
gattttacta ataaagaaat ttactaaatt tacataaatt cagtgtaaca gccctccctt 42240
cccagtaaat tgaacccagt acagggttca acagtatatg tcaagttagg ccacagtaag 42300
tataggaaag aaatggttta taatgctatt tcaatttggg aaagagtgta ggtggtaata 42360
ttataatcaa gaaaaatatg ggagaaggaa tagatttgaa ggcaggaggg agagaaggca 42420
aagtatcttg gtggggaaaa caaggagaga tactaatttt tttctggtat tataaataat 42480
attcagtgac agctatttct tataatttga agtatcttaa atacaaacta ttttgttttt 42540
aaaaacaggt tgtataatta tatttttttat tgtttatttg attgtttgta taaccttagc 42600
tgacctggaa ctctctatgt agaccaggct ggcctcaaac ccacagagat ctatctgtct 42660
gcttctactt ctgccttctg agtgctagta ttagtgtgtg ccaccataac cagcaagatc 42720
agtttattat tatgagatta aaatgataag tgagataaat aattcaggct ttaaaagctt 42780
caaaaatggg gctggcaaaa tggctctgtg gctaatgtgc ttgctgtcaa gcctggtggt 42840
ctgggttcaa cctctagtac ctacatagta gagaaaacta attcccctac acttccctga 42900
ccccacatgt gtgccatgct gcacacacac acaaataaat agtgcatttt ttgaaaatcc 42960
tgaaaaatgg gtgattggtt ggccaatatt catctataaa tctgaattta tgaacttcaa 43020

ttgtaatagt tatattgtat ttttctgttt atactccaac ataattttgt aatttattgt 43080
atattcaatt actaaattaa aaactggtta ttttgccctg ataagatttt atatttagac 43140
attgagttct taagaatatt attcaatcag aacagttata tcaccaaacc tcccccatat 43200
tctttaaata tttatttta tcttatatat acactttgtg tatgtctggt acccataggg 43260
accagaagag ggcatcagat cccctcgaat tggggtgagc cactatgtag gtgctaggaa 43320
tcagacctct gcaagaatag taagttctca tagctgctga gccatatctc cagctccctc 43380
ctcctgtagg ctccaaatct tctccaaatc actcataatt attaatgtag tattgtattt 43440
tattacttag ggaataatga caagaaaaaa agtatatata tgcattccct gcagataaaa 43500
atttttaaa tgaagaaatt ttttcttgcc ttggcagaac ctagggatgc agaagttgga 43560
ctgtaactac aaacagtgac agtgtttctg tccgatatct tccctttcta cttcccaggc 43620
agagctgaga cagtgtacac tttctgcaga ggccactagg agtgagcctg cttcatattc 43680
agctccctct ggaagctcac cagaactggc atctgggcta tgcctgagtg cctgaggcag 43740
gcttctgcgg gctagacaag gatgctcagg aactctcctc tgttcacagg tggtccccat 43800
gcttcccagg cttctgtgtg aggaactctg cagcctcaac cccatgactg acaagctgac 43860
cttctctgtg atctggaagc tgacccctga aggcaaggta gtgatgaact ctattttatc 43920
attcattctc cacatacatt gtctcatcct atctcttgtg gtaagcaccg tgtcctgcac 43980
tagaccacag ttccacagtg gatggatgca gaggtctgga gtggctgctg tagggaagaa 44040
gtctaaggac cctagctagc ctcagaagag ccagtcctac ctaggaggca aggctgaccc 44100
tactcagtgc cagtatttac cagctagcaa ggagcactaa ttgtgagatg ggagctatgg 44160
gtggatgatg gcttcagtga cggtgcatat acatctggaa ggcagctaga aggccaggtt 44220
gtaaacgaat agtgggagtt ggtgttcctc tgacatgtcc tgaagaagac agccatgaga 44280
gcttcagttt cctgggagat ggctgggatt atgaagatta gcaaagatga gtagagtaac 44340
acttgaatca gagcatgagc taaggcaaac agagactaga gggtgtccac aagtactccc 44400
tctacacggg agcaaagaca aggagcaaag gtgacacttg ggagaaccag ctccccctcc 44460
aaagtgagca accacaaatg acagagtcat cctggagggc ccagggctta gtcaggcagg 44520
cttctgaaaa gctggttgca aatattgtaa aggaatatga gaaatatata tgctataata 44580
atagatggga gccaaaaaag atttatctat aaagaggttc caaataaaga tggaaggtta 44640
aataaccaca ttgattttta tcccatccca aaagttcact aaacaacagt aaagagatta 44700
aaaaaaagaa aaagaaaaag aaaaagaaaa agaaaaagaa aaagaaaaag aaaaaaagaa 44760
aggcataatc ccatagtgac acagcacgtg ggcaaggggg caacagcaac acagctggag 44820
ccaggagggc gagcatgggg agtggcaact gactgagcag acctggcaag cctgagcctg 44880
agccaggcct ggagggagcc aggggataaa cattgagaca ttgacagcac caggtaatca 44940
actggaaggg gatggctgag aggctgacaa cagctttggt ggaaagttca ttgaagagat 45000
tgacccctgt ggtcttagca gaagacctag agttttttt ttctctatag agaattaact 45060
ccaggattct aggagtcagg cctgtgccct gtgagtcagg aggtggggat atctttctct 45120
gaggaatcta agtaatcaag agtaaccagt cagcagcatc cttaaggacc ttccaaccag 45180
caacccaaca ctgtccagtc cagtccagtc cagtccagta aagcttagag gtttgaccta 45240
catagtgaga gcctttggga tttcttcgct gctgctgctg ttgctgctgc tgctgctgct 45300
gctgctgctg ctgctgctgc tgctgctgct gctgctgctt cttcttcttc ttcttcttct 45360
tcttcttctt cttcttcttc ttcttcttct tcttcttctt cttctccttc tccttctcct 45420
tctccttctc cttctccttc tccttctcct tctccttctc cttctccttc tccttctcct 45480
tctccttctc cttctccttc tccttctcct tctccttctc cttctccttc tccttctcct 45540
tctccttctt tctcctcctc ctcctcctcc tcttcttctt cttcctcctc ctcctccttc 45600
ctctgtctct ctctgtctct gactctctct gtctctctgt ctctctcttc ccccctcctt 45660
ccccctttc cagacagggt ctcagtatgt agctgtggct aacctagaac ttgctatgta 45720
gaccatgatg gtttgtaact cacagagatc cccctgcctc agcttcagct ctgctcctgt 45780
caccatgccc agctacggta tttcactttc atgcatgaag agacaaccaa ttggaaagca 45840
tcattcctaa aataaataca gcagagcaca catacaagga gaaggaacca tccttgagaa 45900
ccattagaga attttaaaca gaagctatct attctatgat agctaacttt aaagagctgg 45960
attgggggag ggggggcagg acaaggagat ttttagagat taaaaacagg atagaaataa 46020
atggcgattc atgattctga tttaaaataa agttgaatgt tccagaacaa tcaaagaaaa 46080
gaaaattagg ggataaatct ctctctcaat ctctctcaat ctctctctct ctctccctct 46140
ccctctccct ctctctctct ctctctctct ctctctctct ctctctctct cacacacaca 46200
cacacacaca cacacacaca cacacacaca cacacgcctg aacctgctct atgacagttc 46260
cagaaaccaa agcagaggaa atgggggaaa atgctgaatg aaactattca ttctttttt 46320
gtttgttttg ttttttttt tcaaaacggg tttctctgtg tagccctggc tgtcctggaa 46380
ctcactccgt agaccaggct ggccttgaac tcagaaatcc acctgcctct gccttctaag 46440
tgctgggatt aaaagcgtac gccagcactg cctggctgaa accattcatt cttaaaggat 46500
gtgactttgc aggtgcagaa agctcattgc aaccccagtg gtggggacat gccatcccta 46560
atgtacaaac ccttatagag tctcaggata taggagacaa ggaaagaccc agaggcctta 46620
gaaaggccaa aggaaggcac acatacagta gaccagaagg taaaccgagt tcagactctt 46680
tcactccagt ctcagaagct ttgtgatagt gcagggaaaa ctccctgtct agaaggatag 46740
gatccctatc aaatataccc tgctaagctc tcagtaaact gtgaaagtca aaaggcgtgt 46800

cttcaggcat gtgcagtctc agaaacaaag cagaacttac aaagctcttc tttgggaagc 46860
ttcataaggc cttgttgttg attctgtaat catagaagcc aagttatgaa tcttgtgagc 46920
tgaaagccag cctgggatac tcagaaaaac tgtctcaaag agaaatagaa atgagagagg 46980
aagcaggaag ggaggggagg ggagggaaga tgagagaggg ggggagggga gagggagggg 47040
agagggagag ggcaggggag agggcagggg agaagggaga gggcagggga gaggggaggg 47100
gaggggaga ggagaggaga ggagaggaga ggagaggaga ggagaggaga ggagaggaga 47160
ggagaggaga agaagaagga agaggaggag gaggaagagg aagaagagga ggaggagaat 47220
aaataagaaa gaagaagagg agaaagaaac tgctggatta aagagatggc tctagaggta 47280
aaaatacttg ccatacaaac atgaggacct gaattcaaat cctcagaaac catataaagc 47340
caggtataat ggtgagtgtt tgctatccca gtgctcctac tttgagatgc agggcagggc 47400
agggcagggc agggcagagc agagagcatc cccagaagct ctgggccaac tgccttaccc 47460
aacacagtaa cagacaacag aaaaggcctc tgtgcactgt gacaggagtg acaacataca 47520
ctcaaataca catacatgca cacatgcata tatgcacagt atatggagtc atcagagagg 47580
gacacaccag taaagttcat gcccattcaa aaaagggaaa agggcagagc agagagctgg 47640
ctgtctcttc tctgacatgt ggaagatgct gctgagcagc tgctatgttg gagctgtgga 47700
aacagtcctc accaggactg aactggctgg cacttgatct ggaactttta gccttcagaa 47760
ctatgggaaa taaatttcta tggcttaagc cacttggttt gtggtatttt gttatagcag 47820
cccggacaga ctaacacagt atcagatgaa ctttgttaat caggttacat aaaaatctac 47880
tgagaataga acttttagcc aggcatgact ttttaatgta tactggccat ttagaaagta 47940
ctgacttaat atgctgatct ctaactgtgg gcacatttca atatatagta ttctaaaaac 48000
cacattgtta tcgtcattgc tattcttact agcccaacct tttcagtatt aggaagccca 48060
caagttcatg tatcagatgc aagatttcta gaattctaat cttgtaaaag tttaatttgt 48120
atcatgagtg ataaacaatg tcatttgttt ccttgaagca ctaaatacca aagtctaaat 48180
aagcatggtt tccaggtcag gtgttccttg agataaaaat ggtatttttg aaagaatact 48240
atatctatca gttcagctca cagctagcta tgtgcacact tttcctccaa aggtcatcct 48300
ctgcctcatg aagaatagtg acaaagataa gtacttggag ttgagacata gaaagtaatg 48360
gcttttactt gtcccatgag aacattctag ctctctcttc cctgccagtg tatggtgggg 48420
aagtagtgtg accactgtgt cctatgcagg tgaaacattt tacctgccag accactagac 48480
cagtgctgtg aatggtaata tacaaagcag actgtgtaac gccctggact atggctaaaa 48540
acattttgga ccacataggc tactgaatgg ggctcgagga ctcccaagag tccatgagcc 48600
atattttaga gatgaactcc tatttaatca aacaaaccaa aacaagacaa atatgaatct 48660
gttagaggaa aaggcttcac aaggaatgca gcgacacttc ctctttctat tgccacagaa 48720
gcgcctggat acagggagtt caaagagttc tgagccagct gtagcctggg ttgcatagtg 48780
agcactaggt cagtcaaagt tacataccaa gaccctgtct cataaaaaat aataaaacaa 48840
aacagaaaaa tagtattaga atgatatgtg ctttaattag aaaaaattca actatatgta 48900
gtataaggaa aacatcacaa taagccccca tccctgtttc ccagattcag tactgtcaag 48960
ggttcattct ctgttaagac tatagtattt taaaacaaac cacagacatg tcatttcact 49020
catgtgtgtt ttgatatgta actaaaaatc tgggcatttt cttatataac cacaatgtcc 49080
tcagcatacc taacaatgag ggctggtatc aggatgccat ccaaaaccta gtccctaata 49140
tatttccttg gttctcgcca attgattggt ccaaactggg atcaaataaa gctgtacaca 49200
ttacatttgg tttttatagc tcttaattat ctggtaaaaa gtttcttttc aagctctaag 49260
aggcaaacat tatctgaact acagagaggg agctatgagt gcagggtgcc agcagccata 49320
atctgggggа ggtggaggca ggcttagggg tggtgaatgg aaaaagacca gaaggaaata 49380
acacaaaatg ccagccgtgg ctgtattttg gatagtaaga ctgtgagtaa ttttttctat 49440
ttttttctat cttctaatgt tttataaaaa tatgaataac ttttatattt ttataatact 49500
tatttttaa aaaaataact aaaaaatgac taaagaaaag aaaagcccat agaattatcc 49560
tacctcaagt caatagaaaa gaacactgtg tctgaatttg ctaccagggg cagacctgag 49620
aaattaaaga tgcctgatct aatgtgcttc tagaatatgg gggtcataaa agaaacacta 49680
ggaaaatgtg aactccaaca ttcactggcc tttgaagttt cttttgaaag caggtatatg 49740
gaacccagac cttctgctca atgagggcta gaagacaggt gtaaaagagg catgggtctg 49800
caagggtgct gagccttcct ccaaaccaca ccagatagga agtatgaggg ctggtactgt 49860
agacagggtt gtggggcaag gcccactgac cacactcttc attctgtggt gacccagacc 49920
cagtgaccac atgagcgata gatcatttgg taagcctggg gatgaggtaa catctctcct 49980
tcacagtcaa gatgcccgt 49999

<210> 11
<211> 49999
<212> DNA
<213> Mus musculus

<400> 11
aatgaaaggt tcagtaccac actctaggtc caagggctga cagtctagga cactagagtg 60

gaaagcctaa actaagcttg agaccaggta ggaggtcagg gtgccataga aggccctgga 120
agcaagagcc caggtgaatg aagaagagca tgtccaaagc ttgtgtggct gaaaccccag 180
gtttagtttg caggttgtga gggcttatct tggtatagag gcaaaaggtt ggaaggagtg 240
gtaccggagt ggacaaagct ttgcaatctt ccttaggcta ctacaatatc ctgctttctg 300
aggcaggcac tgtctgctat gagaatgctg ccccagtgta ttttgtgatt gttgttggtt 360
ttttttaatg tgggtatttt cagcacctgc aagaacattt ctgcatccct ggagctagtg 420
ctgatggcac tctcctttca catcagcact tctctctcct tttctccatc cttccctgct 480
cttcatcagt aaaaatgctc ccattgcaac ctgaaaataa gcccctgtct tctggatctg 540
ttaatgcccc tctcacacat ctgctacatt gagcaagtca aagctgttca gctgtgcctc 600
tcctcagagg ggaagcctct ttctcttagt acagtgacta ccttaatccc agtccacttt 660
gtcttattct ggggccttct agaataaggc cattattgtt tccccattag aagctgaatc 720
taattccttt atataatttc ttcatctcct ctggccacat gtcctgatta accccaaaag 780
tccaatcttt ttttttaata tttttattat tatgtatttt cctcaattac ataattagaa 840
tgctatccca aaagtccctc aaaccctccc ccccacttcc ctacccaccc attcccattt 900
tttggccctg gcgttcccct gtactggggc atataaagtt tgcaagtcca atgggcctct 960
ctttccagtg atggccgact aggccatctt ttgatacata tgcagctaga gtcaagagct 1020
ccggggtact ggttagttca taatgttgtt gcacctacag ggttgcagat ctctctagct 1080
cctccattgg gggccctgtg ctccatccaa tagctgactg tgagcatcca cttatgtgtt 1140
tgctaggccc cggcctagtc tcacaagaga cagctatatc agggtccttt cagcaaacgc 1200
ttgctagtgt atgcaatggt gtcatcattt ggaggctaat tatgggatgg atccctggat 1260
atggcagtct ctagatggtc catccttttg tctcagctcc aaactttgtc tctgtaactc 1320
cttccatggg tgattgtttc caattctaag aaggggcaaa gtgtccatac tttggtcttc 1380
gttcttcttc agtttcgtgt gttttgcaaa ttgtatctta tatcttgggt atactaagtt 1440
tctgggctaa tacccactta tcagtgagta catatcattt gagttctttt gtgattgtgt 1500
tacctcactc aggatgatgc ccctccaggt ccatccattt gcctaggaat ttcataaatt 1560
cattcttttt aatagctgag tagtactcca ttgtgtaaat gtaccacatt tttttgtatc 1620
tattcctctg ttgaggagca tctgggttct ttccagcttc tggatattat aaataaggct 1680
gctatgaaca tagtggagca tgtgtccttc ttactggttg ggacatcttc tggatatatg 1740
tccaggagag gtattgaagc atgacttacg gaaaccagct ctccccctgc atagccatct 1800
gtcaccacca tgcctcagcc ctcatcttct gttcttgcta ctgaggggtt ctttaagcct 1860
aacagggact tgtcactgaa actccataca tacttggtcc cttccttgaa gacccttcct 1920
ctcagatctg cgagcaggaa gcatgtatat cccttgtgat ccagctaaaa tgccatttct 1980
tccaggatca agtccagaac ctcacactga aacccaagcc ttgtgatgtt cttagtggtg 2040
acattcttat tcacgtagta aatattgaat ggtatttgtt gcactcagat accatacaag 2100
gtattgaaaa tctcagacat ttccccatcc agacagaagt ccatctttcc tagttgtagt 2160
tgtctattct ccctttcccc tggctgcatg ttttaaattt cttacagtaa aggcatattg 2220
caacttaaaa gcaaaagtca ttttgagaca ttttcgcctg ttttttaata agtagatgag 2280
atattggagt gcatttgtag gctgagtgaa agacagacaa agtgaggaag gagtcacagt 2340
ttgggagcct ggtaaagaag gactcagcct atgagagcaa tgagttccca caggacaagg 2400
gtcagctctt ctcctacctt gactagaata aagggagggg ctgggaatgg ggctcagtag 2460
accatgggaa ggtgattcga tgctccctgt caggttcccc aggggtaaat gtcattttcc 2520
ctgcactcca gggccagttc tgttccattc tgttctcctg ccagactctt ttttttttt 2580
ttacagtttt ttttaattag gtattttctt catttacatt tcaaatgcta tcccaaaaga 2640
ccccccatac cctccccccc attcccctac ccacccactc ccacttcttg gccctggtgt 2700
tcccttgtac tggggcatat aaagtttgca agacctatgg gcctctcttc ccaatgatgg 2760
ccgactaggt catcttctga aacatatgca gctagagaca cgagctctgg aggtactggt 2820
tagttcatat tgttgttcca cctatagggt tgcagacacc tttagctcct tgagtacttc 2880
ctctagctcc tccattgggg gccctgtgtt ccatccaata gctgactatg agcatccact 2940
tctgtgtttg ccaggcatcg catagcctca caagagacag ctgtatcagg gtcctttcag 3000
caaaatcttg ctggtgtatg caatggtgtc agcatttgga ggctgattat gggatggatc 3060
cccgggtatt cctgccagac tcttaagccc ggaccagagt tttacgtctt cctcatagtt 3120
cagtgccctc tacccagaaa acactttgcc ttggttttca ctgttctgtt tattcctgtt 3180
gcttagtgag atggtgggcc ccaaataagc atgtgcatcc ccagcagcca ccccaatcct 3240
atgaacttgc atgctgggag ttgtggagtg tctcaggtag ccctgccatg cttccccaca 3300
gagctgctct tcatttcctt aatgacccct gtggactttc ataccattaa cctgccagat 3360
gccaccactg aaaagcttgt attcttcctg ggctactgtg gtccaaagca agactcccac 3420
agtgccatgt agcttaaggc tttcgctaaa agcagtgcta ggtgctgtgt ttcataccta 3480
ggcaccctac taaatacctg agaaactcca ggaggaagta gcttcaaagc ctagttctga 3540
gaatcagaaa ttgttcccat aatctctcct cttagtcact acaaggggca gagcctagct 3600
gttttatttc aggactgtcg gtgggacctc tgtagcaagg gagggatgga aggagctgct 3660
gttccatatc cctcaagtcc cagttttcca ctgaagacac cagccagcta gatggcttcc 3720
ctaaggtcac atcagaggag caacggaact cagttgtgaa gcagtgaagc ttgaggatga 3780
aaagcagaat ccaaaatgaa acattttcaa gatatgaaat gaggtgtttg tttcagtaag 3840

cagcagaaaa ggttatggtg tggagtgtct tttcaaggac aaggggcttt atgagctggc 3900
ttacaatgga cctgttcaaa ggaaggctgg ggtactaggt tcaccaggca gaaggtatct 3960
gtgatgtttc ctggatccag aattccccca ccccccaccc ccactgctac ttcccacatt 4020
ctccttcttt ctccctcccc tcctccagtt tcctttctgt acagagagat gagtcccaaa 4080
catgagcctt taatggggga cttttgggat agcactggaa atgtaaacga ggaaaatacc 4140
taataaaaaa tatttaaaaa aaaaagatgc ctcctgccag tcttgaggac agtggaacac 4200
tttgaagatt atacctgctt gagtaccttt acccactgtt acgggaacac aattcctatc 4260
tcctggccac agctagagtt tcggctccct ctagcccaat ggttctcagc cttcctgatg 4320
ctgcaaccct ttgatacagt tcctcatgtt gaggtgaccc ccaaccataa aattatttca 4380
tagctacttc ataactataa ctttggtgct gttataaacc ctaatgttag caaccaacat 4440
acaggatgtc tgatataatc ccaaaggggt tgcaacccac agattgaaaa cccctgatct 4500
agatgctgta tgtggcaaag atttggtttc ctctgcttcc ttgtctttgg tttagaagct 4560
tacatagctg tcatcagatc aggatgggaa aggacctaat ctctcttgag actgaaggac 4620
aagccagtga gtgataagat tgtatagtta attccagctt cttctctatg cagactctac 4680
catgtgcaca aactgactta gaacccaaac aggctggcta acttggaacc agccaacctg 4740
tgttgctggg cttctaaggc actggtcctt tcccagccac tggtggtctt gacacagcaa 4800
gagcaagcct gtgagatgaa aggagctgct gctggtggga ggcagccttg ccacagtttc 4860
attctgccct gctgtctttc tcttgttgtc agtctcattc tgtcacctca ggcctcagtt 4920
gagagagggc ctaatgaagg aggacccccа accctgcccc ctgcttatat gaagccaccc 4980
catagtttct gactagttag tcacaggtca ttccataagg aatcagcttt ccttccatca 5040
agcaacctcc tgccctttgc tgtccccgcc tctccacctc tgcccaagtc attttcagac 5100
actttgttct tgacaccttt tactgtcctt ttggccagga tggctgggat ggccaggacg 5160
gccatgttgg ctgggatagc catgttgacc agactagcct tgccttcata gctttaagaa 5220
gcagcagcaa tctgctgccc ccaggcacca ccaccactcc agacagcctg cttttgttcc 5280
agtcaggaaa gtgcttcttt ctgccttcca ggctttttga actaaaagtt ctgtatgagg 5340
aagcccagag gttcagaact catttcacat ctagttattt aaaatttaaa attagctcta 5400
ttagtagttt tttgaaccaa atatgtctca atgagttaat atttttcaga gaataatttt 5460
taaaaagttc atggaatagg acggaggtcc aaaggtttct tcacgccttt atatctataa 5520
attgtagaaa tgaggtataa ttgtagaaat atatttgagg tatattttga ttctcatcat 5580
ctacgttacg accttccgct aaaaagaaaa aagtgtgtgt gtgtgtgtgt gtgtgtgtgt 5640
gtgtgtgtgt gtgtgtgtgc gcgcacacac acatccacat gaatccacta tatatatata 5700
tatttttttt actctgaacc ttcaggtatg gacctaagag tttgcatgat tcttgagtat 5760
ttcccacctg attgcccagc ttcccctggt gtgtcaaagt gatgctcaaa ggctgtgtac 5820
ctgaggctgg gaccagcagc actgagtagg tcaggagggg atacctcctt agataatggg 5880
tttctcagcc atgtgtcttc agtctgtgga gagactgtgc ttaagctgac attctgaaca 5940
gtggcacccc acagtatgtg ctagaatcct gtgtagagtt cagtgtggcc tgaatcctgt 6000
ggttatgcaa aggaggcagg acacgatctc ctcaggggta ctgtccatgt gttccctcct 6060
ccttttttтt ttctaccttt tccatgaaaa gccctttgtc ttctgccact ggctctggtt 6120
atggacttgg tgttgatgtg agtacagttt tcagattgga aattaatgag gtgttccatt 6180
gagagaagcc tgacttctac cctggctggc tgctcccagg tttcctccat gtgggtcttt 6240
gctgctttct ctgtgggcag ctgcccttgg ctggcattct tctattggct ttccccagag 6300
gtactttcaa gactgctttc ccaggctaga aactattcta gtacatgtca gctgtgcctc 6360
ccacaagtcc caagccatgg taaagccaga cagccttggc tgagaaggga agttcgaaaa 6420
ggctctcctt tgtatgtttg tgaagaaggg atgaagggca aaagaggaag ggaaatcagg 6480
taaagatgct atggaaacca gcacctaaag tagaaagttt ggtagtgtcc atgtgggcat 6540
tggagaaagg ctgtcttgac aagaaggaaa caaagaagca gaggtaccta ttaggtagaa 6600
caggtgcttc taataagata gtgtactatt agtaggcatg tagccaggct ctggtgagga 6660
atagtaggca acatagggtg acacatggct gctagtcagg gctcaacaat cagaggggac 6720
taaggaagca actgatgtgt agagccaaga catgtgggca tgtaggcaga agaacatcta 6780
agagctttgt acagcttact gtaaaggttt gtgcataaaa cttagaatgc tctgagcact 6840
catcagattc tacagctgtt cttgctccaa ctttgtacag cagaaatctg ctaattgtgt 6900
agtagttacc ttcacttgag tgtcatgtac taggaaggag gatgcaggcc acaggaggac 6960
agatatcaag acctgagtgt ggggaggagt tcatgagcta gctcactggg aggtgtagga 7020
atgaaaaggg tggcacacaa tgtaagctgc caccatctgt cagcaggctg aaaacagact 7080
gcctaacaca catgtacaca ggactgagct gagggagaac tcatttggga agaaaattaa 7140
gaaaagaaag aagcatagtg tccacacttc agtcttcatt tttcttgagt ttcatgtgtt 7200
taggaaattg tatcttatat cttgggtatc ctaggttttg ggctaatatc cacttatcag 7260
tgagtacata ttgtgtgagt tcctttgtga atgtgttacc tcactcagga tgatgccctc 7320
caggtccatc catttggcta ggaatttcat aaattcattc tttttaatag ctgagtagta 7380
ctccattgtg tagatgtacc acattttctg tatccattcc tctgttgagg ggcatctggg 7440
ttctttccag cttctggcta ttataaataa ggctgctatg aacatagtgg agcatgtgtc 7500
cttcttacca gttggggcat cttctggata tatgcccagg agaggtattg ctggatcctc 7560
cggtagtact atgtccaatt ttctgaggaa ccgccagacg gatttccaga gtggttgtac 7620

```
aagcctgcaa tcccaccaac aatggaggag tgttcctatt tctccacatc cacgccagca 7680
tctgctgtca cctgaatttt tgatcttaga cattctgact agtgtgaggt ggaatctcag 7740
ggttgttttg atttgcattt ccctgatgat taaggatgtt gaacattttt tcaggtgctt 7800
ctctgccatt cggtattcct caggtgagaa ttctttgttc agttctgagc cccatttttt 7860
aatggggtta tttgattttc tgaagtccac cttcttgagt tctttatata tgttggatat 7920
tagtcctcta tctaatttag gataggtaaa gatcctttcc caatctgttg gtggtctctt 7980
tgtcttattg acggtgtctt ttgccttgca gaaactttgg agtttcatta ggtcccattt 8040
gtcaattctc gatcttacag cacaagccat tgctgttctg ttcaggaatt tttcccctgt 8100
gcccatatct tcaaggcttt tccccacttt ctcctctata agtttcagtg tctctggttt 8160
tatgtgaagt tctttgatcc atttagattt gacctagtgt ggacactatg cccctcctta 8220
gaagtgggaa caaaacaccc ttggaaggag ttacagagac aaagtttgga gctgagatga 8280
aaggatggac catgtagaga ctgccttatc cagggatcca ccccataatc agcatccaaa 8340
cgctgacacc attgcatacg ctagcaagat tttatcgaaa ggacccagat gtagctgtct 8400
cttgtgagac tatgccgggg cctagcaaac acagaagtgg atgcccacag tcagctaatg 8460
gatggatcac agggctccca atggaggagc tagagaaagt acccaaggag ctaaagggat 8520
ctgcaaccct ataggtggat caacattatg aactaaccag taccccggag ctcttgactc 8580
tagctgcata tgtatcaaaa gatggcctag tcggccatca ctggaaagag aggcccattg 8640
gacacacaaa ctttatatgc cccagaacag gggaacgcca gggccaaaaa gggggagtgg 8700
gcgggtaggg gagtgggggt gggtgggtat gggggacttt tggtatagca ttggaaatgt 8760
aaatgagcta aatacctaat aaaaaatgga aaggaaaaaa aaaaaagaaa agaaagaagc 8820
tacgtctcta gagaaaactt ttttttttt ttttttttt ttttggtttt tcaagacagg 8880
gtttctctgt gtatagtcct ggctgtcctg gaactcactc tgtagaccag gccggcctat 8940
gcctcccaac tgctgggatt aaaggcatgc gtcaccactg cccggccagg ggaaactttg 9000
agaccacaag aatgaagagg tcagagccat tttccttatg aaggaggctg aggctccatt 9060
caggaattgt gggtatgctc ggatctcaag cctggtcact tggatggctt cttgtagaga 9120
cctttagctg catctgtctc caaactgctt cccaacccct ggaacgggct ctgaagctgt 9180
ccttgcctat agcatgcaag gccttgtgag taccaggtat gaggcctgat tgctagagaa 9240
gacaggatct catagagtct cttgctattt gcaataggga tcattcttgg aataatccga 9300
aaagtagagt ttaagaaatt ttgaagaaaa aaaaatctaa tattacagat tccagacttg 9360
ttatatagaa gaagaagaag aggaggagga ggaggaggag gaggaagaag aggaagaaga 9420
agaggaagaa gaagaggaag aagaagagga agaagaagag gaagaagaag aagaagaaga 9480
agaagaagaa gaagaagaag aagaagaaga agaagaagaa gaagaagaag aagaagaaga 9540
agaagaagaa gacgaggagg aggaggagga ggaggggggg gggaagagga agaaagaaga 9600
agaaggagac ggagagaaga agaaggagaa ggaaaaagag aagaagaaga aggagaagga 9660
gaaagagaag gagaagaagg aggaggagga gaaggagaag aagaagaaga agaagaagaa 9720
gaagaagaag aagaagaaga ggaggaggag gaggaggagg aggaggagga ggaggaggag 9780
gaagaaaagt gaacagtagg gattggagag atggttcagt ggttaagagc actgactgct 9840
cttctggagg tcctgagttg aattcccagc aaccacatga tagctcacaa ccacttgtaa 9900
tgggatccga tgccctcttc tggtgtgtct gaagacagct atagtgtact tgtattaata 9960
aaaataaata aatctttttt aaaatttttt ttaaaataat gtgaacagta actgctgttc 10020
tccaagtgcc cctgttgtca tttttaaaaa gccatagttc tttctttcat ggagggtgat 10080
caatcacaag ggtcactgca tacatctagg atagaagctg tgttacatag attcggtgtg 10140
tggagagttg ctgagttcct ctctttcctt ctttctcaaa ggtatcagcc aggcgtcata 10200
gtcccatctc gtgtctcagg cagctatcct atcttctctt ccctctttgt gacattgatg 10260
accattcatc caaacaaatg gaaacacttc ccatgggcca ttcagtgcaa gtcttccacg 10320
tggccttgct ttgtgctggg gaagagtgta gacctcagct gtctcttgaa ttctgctagg 10380
gcctggtagt ctaaactgcc agaaggcagc aacctctgca ttttgttcat ccatgtggca 10440
ccagtcagtg ttgagagaga gagagaggag agagagagag attaagtaca gtctgtcttt 10500
gcagatcctt gaagagtggt ttggccgcac tatcatccgt tcttgcacca aactgagcta 10560
cgaccatgcc cagagcatga tcgaaaatcc aactgagaag atccctgagg aagagcttcc 10620
cccaatttct ccagagcaca gcgtcgagga ggtgcaccag gcagtcctga acctgcacag 10680
cattgcaaag caactccgcc gccagcgctt tgtagatggc gcactccgtt tagatcaggt 10740
cagtgagtct cttttgtttt atgtggtctt gagtttggct tgtgcccaaa actcaagggt 10800
gagaaatatc ctggtggcct ctttctctcc acctatttcc cctgcccctg ccacaccatg 10860
gtaatatgag ttagggtaag atggtatctg tgtacagagt tctgtgactc ccagctgctc 10920
ttacctggaa aacctgtgtc catgattgaa ttctcacttg tagatggcat tgctgtgaca 10980
ggtccctggg acaaagaagg gaggaaggac atatttttgg cttgtggttt cagaggctct 11040
tggaacatag ctctgttgtt tctggcccat agttgggggc gggggggtggc atgtgagaag 11100
tatgtggccc agtggagctg cttgtctcat ggcagccagt aagcagagag acagaggcat 11160
gtgaaggagc agaggcaaga tagactttcc agggtacacc cccagtgata tcaatgaatc 11220
caacagctgg ttctttgaga agataagcaa gattgacaga cccttggtcc aagtagccaa 11280
aagaaataaa gaaggcccac attaacagag tcagaaatga acagggaaac attacaacag 11340
atgcctaaga aattcagagt ttcataaggg catactttaa aaaactgtac tctattagaa 11400
```

atggatgagt ttctagattc agccaaacca ccaaaattaa accaaaaaga agtcaacaac 11460
ctaaacagac ccataacaaa taagattgaa acagtaaaaa caaaacaaaa caacaaaaaa 11520
cttccagcta caaagaaaaa tctagggcca gatggattca caggaaaatt ttaccagatg 11580
ttcaaagaag atctgcaccg agttgtcctt aaactattca aaaagtagag gcagagggag 11640
cactcccagg tctcctctgt gaagccttta tgtcaccagt tctctccgct catggagatt 11700
acttcctctg ctccttgctt catgcttggt gtcctgaggc tgcagcccac catcctgtca 11760
tctccaccaa cagtccctcc ctgattccaa gaggctaagt tgatgctaat gacaccagaa 11820
cttgtgtctg acctttctcc ctcactcaag cctagcttct ttacctgcct tatctgcctg 11880
actgcccttc agcagcacag tggtgctcac tcacccttcc ttctgcagaa agcagtgctt 11940
gatgcccaca gcatggcaca caggcttccc agcatcctct tctcccactg atacactgga 12000
gcattatata tgtgccccca acccaagtgt accagtcgca cagatttttg taattatgct 12060
tagactaaac attagacaga cagatcatat acaactctca aaaggaagct gtttattctg 12120
taaacacatc catgttttag aaagacaagt cttcagaatg tctttaggaa gactgaagtc 12180
actttacaaa tgaaccgtgg ggcttaggaa agtctttaga aaatgaattg ggtttagttt 12240
tctcaaaaag actaggaatc tatgatgttg gcacctataa tctcatctct caggaagcca 12300
aaacaggaag attgaaagtt caaggccata taagatgtat gtcaagatca tgtggcaagg 12360
aagaataaga ggaggaagca gaggaggagg aagaggaaga ggaggaagag gaggaagagg 12420
aggaggaaga ggaaggagga ggaggaagga aggtggagag aaaggcaata aaaagaataa 12480
atttagtttt ctctcactct gtagctcagg ttgaacttga actcatggct agccccctgc 12540
ctcagcttcc caaatggtag gattataggt gtgagccacc aaaccagata ctaacttgta 12600
ttctttaagt cttacttttt ttcaaaaatg gtttagaaac atatatctat gtaaattaag 12660
ttataataca aaatgttagg ttgtatatta tgtatgcctt ttctgcatga ttctcttatt 12720
tacttaactt ttacaatgaa aaaccagctg ttacccaagc ccatcaaatg aggaagtttc 12780
tgaagtacca tttccagatg tttccccact aagatgctat aataaaattc aactggatta 12840
attcatctgt gaaactggag ggaggggggag aaaatagcgg caacttatct ctgtcccatt 12900
ggaagaggtg tggtcatcat cgtaatgacc atagattatt gatggagaat gagcagttag 12960
tatgtctgat actcagaatt gtattactga aaagacttta gatatctgta tcccagtggg 13020
cctcctaact cataaatgag aaggctgagg tccccacagg tagatgggtt gcttattgcc 13080
aggcatccaa gtagctcttt gtttggtttt cctccattta ttacactatg ctgacataag 13140
agaaaaaagt ttgcctttaa agtgaaaggg gaaaacaccc tcaaaaacct aattaggttc 13200
cagttaatta aggtttgaaa gtaatgaatt tgtatccttg gagttgatcc cttcattcgc 13260
cagaaaacaa gtctgtagac ccccacataa gatggagaca tcaatctttg cagccaagga 13320
cactggtgag gccgtttata aatcagctaa atggctttat tcagaagccc tgcgtttgtt 13380
ctcccgtccc tgttgccttc tttgccctca caagttcatt tttccttggt gccttttcag 13440
tggcctgctg tttgccattg ttctctgaag ctttgtctgc catagttcac tgtgtccatg 13500
ttttgggtgg tagtccttta aaaagcacat ccttttatgt cagcagcaat tagagatcgg 13560
tcttcagcca atccagaggc tttgcctttc caagaaatca gtgtttgatg accctgagaa 13620
tgagcaagga tgaagtccga ggcactaata tggtgcttgt ttgcagagtc agagacacag 13680
gctcgataag tgcagaatgg cagagcaacg tgctcaccga gagctgattt taacaaagtt 13740
ttcttccaaa aggtgattct cctttgcccc aaaagcaaca caggcttcca aggctatcta 13800
gtgatttttg gtcgctgagt tgaatgatga cccttctgag tggcttgtct ctgaatccat 13860
gttttcagct accagggtag ttcaaggact tggtacagat gaccacttta attatttgtt 13920
tataatatat gtctctcccg aatcttaaaa gaggccataa tggggccaag acttctgtat 13980
ctgtagaaga aaaggaatca cagtggttcc taatatccat atactgagtt tgatgcaagg 14040
ggagccatct gagggttttt gctcctgact agcacaggcc agccctcagc agctgccatc 14100
taggggggaa gatagatctg cctggcatgg gtgtatttaa aaccctgaaa ccctttgggg 14160
gttctaggtc agctattgcc ttcagaaagg atatgatggt aaggtaatgg ggtgccaaac 14220
agatcctcaa tataagacta acattggctg atgtcaggaa actccacgcc ctgctttctg 14280
aagctctctg aacctgtttc tcttcagcca ggctaagact tctatgtgaa acaaactaga 14340
agtttgcaga gatcagacaa gttctcccag caggcagtta aaactatgaa ttcggagggc 14400
cttggaagtc aaatgaaaaa aacctgagaa aaattcatat aaagtaaagg aggctttact 14460
aagttctcag ctctgtcatc tctgaaacct acttgacaca gttttgaggc ccaagctcca 14520
tgcagtttct ttgtaaaggt agcctttcta atggaagaca cttttgaata ccctgggact 14580
caagctgtgt gagtctgtaa tgtttgatcc taacctagca tagcctttca atcagtgttg 14640
gcaggctttc ccaggaaagg ccagacagta aatgacatga gctcctggtc catatggtct 14700
gtctctgact cagccctgcc tgttaatgtg ctccaaatga atgggggtag ttgaaggtca 14760
ctaagacttg gatttgatat cattttcaca gaccacaaaa tattattctt catttgatta 14820
tttttcaagt atttaaaaat gtaaaaattc ttctttgctc cccggccatg caaagcaagt 14880
taaactgtgt cccacacatc actgaccctg cttaactgac caacaagctt ttcagcccta 14940
ttacccgcca agccttgagc agctcattac cacttcccca ggaagccagg ctaggaaatg 15000
gagaacagtt gggctaagtg acttctcagg atggttccat acaattaagt aaattattct 15060
tttgattagt accacgctta gggggccagt tggaggctgg aagtaagagt gactgacccc 15120
ccaaccccag cacagttctt ttgcccttcc caaggtccag tccctttagc ttgaagccaa 15180

agagtcagca ctctctttac tcctctgcag gaccctcagg gtcagagcag ccctccctct 15240
cccctcccct agctcccccct tctccttccc tcccctggtc ctctgaaggt agagactact 15300
ccaggaagag caggctatga ggaaggtggg tagcttctct cctggctacc tgtctgcagt 15360
gctaattaca gcagagtgtt ccttctctct gccatagata gctgcattct ggatggctgc 15420
tgctcagtgt tgctctccga tgacattggt gtagctgtgg agaatgggca agcccttctg 15480
gtttccttta gctttagtgt ctgtgtcaac tcaaagtaca acatagtcca aggcccaggc 15540
tctgaggttt ttcattcaga gagttcttca ctcagcatag cttcagagac ctgtttgggg 15600
agcccagtgt gtgtggaggg ggtgagaatg taaatgagga atgagaagtt tcaggtatgg 15660
gaagggaggc agtgaaccac tagacagtaa gaagcactgg gtggaagtgc ttgctgaact 15720
tgaaactgag gaatgactcc tgcccaaaac cagtgctcat ccttagaacc ctgaagaaat 15780
ccatgtgcct gaagcatact gtcttagtta gggttttact gctgtgaaca gacaccatga 15840
ccaaggcaag tcttataaaa aacaacattt aattggggct ggcttacagg ttcagaggtt 15900
cagtccatta tcatcaaggt gggagcatgg cagtatccag gcaggcatgg cccaggaggc 15960
actgagagtt ctatgtcttc atccaaaggc tgctagtgga aaactgactt ccaggcaact 16020
agggtgagga tcttatactc acacccacag tgacacaccc attccaacca ggtcatacct 16080
attccaacaa ggccacacct tcagatggtg ccactccctg gtccaaggat atacaaacca 16140
tcacacatac caagagcttt ctgtcctctc tgatcttcag aggacatcat ttgtaactcc 16200
tgtctctttg tgcctttcac ttcctgtaat atgtcacagg agtcatttgt gttgaccgaa 16260
aatccctctg ttatttatca tacacacaca cacacacaca cacacacaca cacacacaca 16320
cacacacaca cacacataca cacacacaca gtagctctgc gactctttag ggtagtgaca 16380
gtggttcagt gggcttctgc tacttccagg ccttccattt aaatgtagac agcacatggc 16440
ttcacttgga tatttagcaa ctcacttatt tctctacttt cctgcttatt ttcatttgta 16500
gatccagctc tctgtgacac tcagacctgg actctcaggg gtagcaggaa gggtggggag 16560
ctgcaccctt caccacagag aatcagaaca cagcctacag tggggtctgg aaacctttcc 16620
tttgagagtg acagatcagt ttagttactg tacattaatt tcatatggaa ttacagaaaa 16680
tagtcatact tatgcacaca tccttccttg ttagatgaat ttctctgggt ggcttgttag 16740
taccatctgc gctctcccta tactcactct ccctgtgaca caacatagag ccatttctcc 16800
cacttccaaa aacttcagaa aatcctgttt accttggaag ttgttatgaa tgcagactga 16860
cacttgacca gtggccattg ctaggtgcct cttgagttct ctctccaaca gcaggaacac 16920
tgctcctaac actgctccta cagcagtggg aagcagatgt cctaccctaa gactgcatac 16980
caagtagagg agaacatatg gacttagcaa aggaggccga ggggatctca agcacgatgg 17040
ggagtggatg ggagtgaagg gcaaggacaa cctgctcaag acagctgtgc ccactgatga 17100
gcatgagaag agccagaggc agcttctcct cctctgagct gaggctgaga ctggacactt 17160
gtgacacacg gaggtgaaag tggctctgtc taccccgaga tggtttagat gaaaggaggc 17220
aaaaaagtag ccagagatag agccacaccc tctgccagct ggaacacttg ggatgcttcc 17280
ccactcctcc acctctgcta ttaccttgac tgttgggtgt ctttccaggc aggatgtagt 17340
gaggcctgaa gctggaactg ctgcagttgg tcaacaggcc tgttcagaag aacactgagt 17400
ctgctttcta agtaactcta gaaagcaagt ttggctccta gcccacctct agaagctttt 17460
gcttgccttc tggttcactc tgcatgttga tgtctagcct catttcttcc aggccaaaaa 17520
aaaaagcatt gcttcatgcc tgctgctata ttctctgggt tcacctctct ctggacctga 17580
agaatctgaa tactgaaatc ctctgcttgt tccaagtggg gctggctcgg ccaaccctct 17640
ctctcagggt gccatagccc ttcatgccta tctttgtcac actgtccagt tgtcttgtta 17700
ccccctctct acccctgtct cctcccctaa gattcagttc ctacagagca aagaccacat 17760
gctattgatc tttctatcct cacttcctga acagtgctgc attttaacaa gctgtttgtt 17820
cagggtctct aaacagtgcc atgcatgctg gtctttttaa ataaggtact gctagctaca 17880
gtggggagaa tggaaaccaa ggctgtagat cagaatgttt gcatgagaga gttactatac 17940
agtgtgaacc aaggctgccc aagtaaactg gctgttactt aattctttgc cagggcatcc 18000
agcatgtaga agagatgtgg tgaggacttt ctcaggtgga gctgtcctga taggcatgag 18060
gagtcagaag gcttcagtat gcttggggtc atcgacactt cagaggttcc ccctcagatt 18120
gggatgtccc tgctggggat gtcaggaagg acactcccaa agttccacca gagaagagag 18180
atgctggtct aaaaaggcaa aaattacctc ctcccagagc tactcctctt acctctggaa 18240
tggggcagaa acaagttgga taggaatggc aacctctagt ctttgcagga tcctgagagg 18300
actccacccc tacccccacc tccgttttgc tcagaatgga aatggcggct accagataaa 18360
gactttctat tggtctttgg ggctttttaa gaagagaact taaatacaac ccaggttact 18420
caaacagaag ttgctgacct tcccagggta cagtggaggg gaggaagggc tctcatgctg 18480
accagaagag acaagaactt ctgtgactta aacagggcat ggctagaacc ctcatttcct 18540
cagagatgag attatttttgt cttatgacct tgacagatgg aatggaattt ggcccttctg 18600
ggactttgcc ttttgggtaa ttgtactcag ttaggcaacc ctgggactct ctttattcat 18660
aggacatact gcatattctt gccctgcccc catgtcacac tcacgtcaat tgaatgtaag 18720
ccagacagct acataagaag catggaatgc tttgacgttg gtaaaacctg cattggagaa 18780
agagaaccct tgcagctgat ccttagattt caaccatgac tgcttcttgg gactggccca 18840
gttgatttca gtttgtattc ttcagtgcgc tcgggactct gtttcctagg ccaaagctct 18900
tctgttctgt tcattctaca ctgagctcct gcaaatgttc ccttgtccct caagaacctg 18960

cgggtatcac agaccaatgg cagaaatgtc tgggggacaa catacaggtg ttttatttta 19020
ccacacaagg atatattaaa aaaaaaagtt agggtagtgg tggcccacgc ctttaattcc 19080
agcacttggg aggcagaggc aggtggattt ctcagtttga ggccagcctg gtctacagag 19140
tgagttccag gacagcccag gttataaaga gaaaccttgt ctcagaaaaa aaaaaattac 19200
taagctaggg ctatatagct tagctgttaa gtgcttaccc aacaacatga gaccttgggt 19260
tcaatctgct gcacaacata aactgtgtag tggccacaca cctgaaatcc cagcactcat 19320
gaagtagaat caggagaatc agaagttcaa agccagtttc aaatacagag aatctgagtc 19380
cagcttggag tgcataaaac cctgtctggg aaagaaaaaa aaaaaaaaaa aaaagcagtg 19440
ttcccgtaca catgaagcat tctatcccca agacaaagga aatacacgat gtgacaatat 19500
gaagtaggtt tctaatacat ttttagttat ttggggagtg tgaagatatg catcacagca 19560
cacaaatgac gatcatagga cagcttacag cagtcagctt tcttcttata ccacatgggt 19620
ccgaagatgg aactccagtt gtcagacttg gccgcaggcg agtttatcca ctgagcctct 19680
ctccggccat gaagcagtta ctttacgttg actcgcttga gcttgttggg agcatgctta 19740
attattgctt tgctcacttt ggttgcctca gagtagcttg cgagaattac tagactcaca 19800
cgttagaccc agatgtcttc tgccttctga tgaggagcaa gcgtgtgagt aaggagggga 19860
agcaggtcac agtccaagcc gctcaagtct gagctgcaaa tccttcattg tacagacggc 19920
tccgaatcag aacacttcct gttgctacag tcaggacggt tatagttttt attgttataa 19980
atgacattgt aattaatacc cttacacaga aagtgtaaaa gtcacttaga aatacaaaca 20040
tcataaacta ctaggttgaa gaaaattgac tttttctgtg tcaattctta agattaactt 20100
tgattatttt attgtaaaat gaatatatgt tcatactgta aacatattta aataaacaag 20160
gaaaaagtag ccattggcta tgcctcacct agtaataata cttaatactg ttcacttcag 20220
agcttttggc tttctgggtg ttttccagaa ggttggacta attgaggttt accccatcag 20280
agaacagtgc tatgctgtta ctcttctcag caaattcagt ttgtggcttt gctttaatct 20340
ttgttagtgt aagtaacttg gaagtggtgt tccattgttt gagttgcctt ttttcctcct 20400
gtgtctctat caactctcag gcctgtcttt gccaggtctg tggaaagcag atgctacatc 20460
ccatccctag gactgccaac agcatcagca caggcccctg ctctgatcaa atacaaccac 20520
ctttttccct atgaagatag aattatatac aataaagtcc accatcttta gtgtataggt 20580
ccacaagctc cacacataat catatgtcta ccatggtcaa aatacagaat agttgcctca 20640
cccaataagc tccacatgtg cccttcggta ggcagactgt ctcacttatc ctcagtccct 20700
agtaagccac acatgagcac atgcatacag ggtacaaagg tcaatttaag gtaccattct 20760
tcaggtgccc tctaccttgt ttgttgaaac cggatctttt actgagaccc agagtcacca 20820
attggctcgc ctatctaaca gtaagctcca agtatcgtcc tgtctcctcc tccccagcac 20880
tgggattaca agcatgtgcc accatgcctg gcttttaatg tgggttctgg agaccaaact 20940
tagatcctca tgcttgcatg gaaacatgtt ccaactgagc tatctcccta ttctaatttt 21000
tgcccatttc ttaggtgggt cttttggttt cctagtacta agttttgagg attcttttgc 21060
tattttaaat agaacctcta ccaagttgtg tgatactaca agccatccag ctcattcttt 21120
catcccttgt cttattcttt ctggctcttc tttattccct ttcttttgaa aagaagtttt 21180
taattttgaa gcagtccagt ttaccaattg tgtccttatg ttatcaaatc taagattttt 21240
gttttgttcg ttttgatggt attattattt attattatta ttatttaatg tatgtgagtg 21300
ctctatctgc atgtatacct gcatgccaga agaaggcatc agaactcatc atagatggtt 21360
gtaagccacc acgtgattgc tgggaattga atgagggacc actagaagag cagacagtgc 21420
tcttaactgc tgagccatct ctctagtcct attcattttt ttttaaacag tcttgctatg 21480
tagctcagac tggccccaaa ctcaagatcc tcctgactca gcttcccaag tgctgagatt 21540
acaggcttgt tcctctaact cctggcatga gaaatcttta actgacctag aatcacagat 21600
tttcttctag aagtcttata gcttcagaat ttatttctac tttctctctt cctttataaa 21660
cacattccta ggcccagaca tttcttttgg aaaaaagttc caataacaga actggacaca 21720
cctgagcaga tgtagggtag agtcagacct gggagtcttg ccaggcacag taccctcctg 21780
gagccatctg caaagaagtt acctcaggag tggcttgtaa gcagatcttc tctggtttta 21840
aagacttggc ataaaactga aaagtgtatc ttttgaatca gggagcagaa cgataagaga 21900
gaaatctctc agctctctag acaaatcctc ttgactatca cagagctgat ggtgagcgga 21960
gccaagcaag actttgtcga ttacatgcaa acgcccaagt cagtgactca ctcaatcatg 22020
ctttaatctc ataactcagt ggctttaaaa attacagtca acaaggcagc tcgtgggtta 22080
caactgccat tggaactagg ttttctctga acagctggag tgtaatgtgg tgggaagaaa 22140
gcctgctgtg ggtgagaggc caaagactgt ttgcctggga aggatgtgca actaacgttt 22200
gataaaaatc tgtgaaatga ccaccctcag ccaatctaag tagaggcctg ccattttcat 22260
ccatgggaaa gtgcatcaca gcaaaagcat tcagaaggca ctggtaagac agtggcagtc 22320
accattcatc agacaagaca gccctgactt caggaagtgt caggagtcag agtatgagta 22380
tggaatatta acagagcagg cagaagattc caattctagt caaggagggc cagtgagaga 22440
gaacagtttg ggaatggctt ctctgaacag atccaggcag atcagtgcag tcatttgcta 22500
tgttctaaaa tgtgtaggcc tctgccatag ctgtgtcacg gaggatatat aaacaggctg 22560
ttctttgagg acctcattgg gctgtcccca ggcacaaaca ttttcttaat ttcaatgtag 22620
aagctgttac ccacaggaga gatggagtag gactttggtt tcagagccct atctatagca 22680
gctttgttga gacctaactg gaaaggctca agataggaca tcacacaagg catttagaag 22740

cttgtagcag tcatcagaca tcagaccaga cctgacagga agaaacaggt gagtctcaag 22800
agggttcatc aggatgctca cgagtttctg cctgcacagc atgggcatat ggtattacca 22860
ggagaagcca tctatctgcc cataggggac aagcagacat cagttgggtg atagggacat 22920
gaaaactttc tggcccatct ttatatctgt tccagtgaaa gatgtgtgag gtcctcaccc 22980
ctgaaggctc tatacttccc tctcctgcta gacagtctag cgagactagg aagcaacaca 23040
gaatctagat gaggcctctg tgagctgccc aggtccttag gagtggagtg gggcaggacc 23100
cgttacaaga gtacaccccc cgcccccgca atgagcccag ttgttcacta tggggccggg 23160
aacatcaccc agcaggccct attggtcctg gcctgctccc ctccctcctt acctcctcac 23220
tcactcttcc cagctcgatc tttctcgctt gttagagaga gaaaaaaagt gaattcactc 23280
ccagtccttt tgaaacccaa tgtgtcagtg atcgatgagg ctgtattctc taacttcaaa 23340
ggagaaaaac taagtagagt gaatactggc caggggagtt gaaaagtccc agggagtagg 23400
agacacagga gtgaccctgc catcatgagg agcacccccc atcccacccc tgctggtgcc 23460
atgcagaagc acagacaatg ccactttcag taaatcatga cggatcctga atgcccagtt 23520
ttgtcctgtt ttcaatgggc tgtgggcata ttgcttaaga tatagcaagc catttgtgct 23580
gggttcccag ctactcaaag gctcgacatt tgagtgttct ctcaattgta taatagagcc 23640
tttgcatatg tgatttgggg ggagggtttt ttcctccaga tttccatagc taatcatagt 23700
agaggtgacc tcaagtgtag tgcagaccat tgtccctctt cacccctgca gatcttagca 23760
gtgctgagct ttagggatat tcaggcagca cctaattcaa tcacacatct gacccctgcc 23820
tctttggcca ctcctctgag ctcagtagct ccctggggtc tcccacccca caagcctgga 23880
tcctcaagag cctttgtact gagtagaaag tgctcagacc ttcctccacc ctatccagat 23940
tcccactccc cccgcctgaa tttaagcaca gagaatccag tgctgcaggg ccacttgttc 24000
tcacaaggct gcacttgtgg agatgcctgt gtgaagcacc ctgtagacat cccatgctaa 24060
agtcttggga acacagagaa agaaaaccct ggggtcattt aagggctggt gtggtcattt 24120
acttaatcat ctgtgaccag caagggcctt gttttcagta aagctcggaa gcttccttgg 24180
ctctttatca atcataacaa acagctagaa tttattgaga gccttctctt tgccaagtgc 24240
ttctacttgc taactttaac ttcctccacc ctcaagccct ctacccattt ttacagatga 24300
ggaaactgat gctcaaggtt gaggagttgt caaagagtac acactggcca ggattacgga 24360
accatcttct gccactactg cctttctctt gttggatatg gacgctgtgg ttttatactc 24420
tacacagttt aaaaatggtc gaagttctca atttagggca actttgaaag gctaaagtgc 24480
tgtgtgagta tagtttttat aatgacaaaa ttccagaaga ggagactaag tgaatagttg 24540
ctggatgtca gagctaatgt tgctaggagg gaggcccatg tcctgggacc gtctggtctg 24600
tctcaggggc agtggcaact gtgaggatcc aaccatgtgt gcagagtggc cccaatatgg 24660
acacattgtg acaatttcct gagctataac catgtaagat gtaacctttg gtggtaattg 24720
agtgataggg acatgaaaac tttctggctt attattgttg tttgtttgtt tctattaatt 24780
ctcttaagta cctcagaaaa aaagtgctac ttaattccat tgtgtcaaga tgacccagtc 24840
tcagatcaag agccacattc tgcccaagca gttcacacca tgcaatttca ggacctagga 24900
gggaacagtg tctagcagag agaccagatt ttaatgccag tcagatgtaa gctgagactc 24960
tctttccctt tttatggaag tgttaaacta agggttggat gtttataccc caatctcagg 25020
gctgtagtta gggacccaga gcaagtttct caaattctgt aacctttca gttcctagct 25080
gtcaggtagc tatgtgaact gtacccatct ctagaagcca gtaagagaat ccagtagaac 25140
ctgatggcct aaaattgatg tccaggtctt acagagtaaa gagagagagc tgacttcagc 25200
aaattgtcct ctgatatcta cacatgtgtg tacctgaaaa cacacatccc actaataaaa 25260
tatattaatg taaacaaaaa aattaaaact tttttaataa aagaagagga tctagcgaga 25320
acacatcctg ccaaaaaaca aaaaaaattt ttttttaagt tacaggtagt ggtgaactgc 25380
ctaaaatgag tgctgagaac taaacttggg tcctctggac aaacagcaaa ttctcttaac 25440
ccctgagcca tctctccagt cctagcctta ccacactcgt cacagaagat atgttgagct 25500
cactctagac gacttattgc tagcatgagt atctgtctag tcccatgtct aatcttcatg 25560
atgtaatcag acctacccag cagatagcaa ggcagcagta aatgctcttt tttatttttt 25620
ctggacttgg tcatttattt cttcactgtt attactttac tgaagatttg ggctggcact 25680
ggtgataaac tgataggtat acccaggtgg tctctgcctg tatttgtttc tcctctattg 25740
ctatgacaaa acgccatgac caagacaact taaaaaaaaa gaaagcattt aattgggctt 25800
atggtttcag ggggctccag tccctgacga tggagcaaag gcatagcatc agcaacaagt 25860
aagaattcac atcttgatcc ataagcacaa ggcagagagc acactgggaa tagcaccagt 25920
cttttgaaac ttcaaaacct gcctccagtg acatacccct tccaacaggc cacaccccaa 25980
tccttcccaa gccatttcac caaccattca aaatatattc acaatatatg agcctcatgg 26040
tgttctcatt acctgagacc actaaagggc ttcgtatttc ctatcacatg gaatcctccc 26100
atcatgtctt ttataactta gagtaggcct attccatgta gactcctcta ccagatccat 26160
ctcggagctc cagcaatgca gtcatgtgac tgagcgtctc tgccagcctt tgctctgaac 26220
tgcacattct gcctccacag tgaccagagc tgcagacaat gtatacttag gtccatgccc 26280
taaacaatag atcctagaca cagaagtcct cagcccattt cttcagagaa gagcagtagc 26340
tcctatgtta atcttagtag cagtggtggt tgttgttttt tcttggttcc tgtcagtcag 26400
tattttgacc agctgactaa catttcttat ttcagccttt tgcatcctct gagagtaaga 26460
tcctcttggc ttcagttctg gtctctttac tgattttgag tacaactgag ccatgttagc 26520

tggaaggcag acattgaatg gaaaagtaga gctagcatgc ctgtctctct cactcattgt 26580
acccacctct gacagggtat gtaagggtac ccgtccctca acccagcctc agtcagccca 26640
tgactctgga tgggccagtg tggttagcca ttcatggggg ttgcatgtct taaataaaag 26700
ggcatggaag gaagcctctt tgcctatgat cctcaacaag gttcacatct gaatgccatt 26760
tgctgttctc tgtctgcttg aacctagaga aggagaggtt gtagcatggg gctcttacat 26820
gggagatagc aagtgggaaa tgcagacttt agagccaggc aggtttgcat ctatatgcca 26880
gttgaccaag tgctgatttg ccttatttta gccaaattac tatacctacc ctagcatcca 26940
tcctgaactc ctttaaatag tggcaatggt aactgggcgt gtgaccctct tggcaacatt 27000
ccagctgcac aaggagcctg tgactcctgc ttctcctttt agggctttat ctgatcttgt 27060
cctttgtgtg tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg taatctttgt 27120
ggggcttacc caaagttggg taagtccaaa gttgggactt ctgtattaga actaggatgg 27180
ttgggacaag ataatagctg agcagataca cagtggatat agtgaacaga actgtatact 27240
tgcatttgga ctgcctaagc cagtctagca ggttgttgtg gctgcttccc tgcccaatca 27300
ccaatagaca agtctactgg agccaaggtc tgactgggct tctacctggc aagacacatc 27360
tgccaaccca gcatggccgt cttaggttgt ttgtttgggg atttgaggaa ggggtgagag 27420
tttatttggc tatttgctta tttggttaat ttattagtat tcttgtttgg ttgattgttg 27480
ttgttgttgt ttttgaaaca aggttttact gtgtagccca ggctggcctc aaactctcct 27540
gcttcagtct ccagagtgcc agagttagat gcatgtaatc ccatcactag tggaagcctt 27600
acttttgaag agtgtagctc agttagaggt atgtaatgcc ataggctgaa gcagccctag 27660
agaccagtca ccaagggaga aggttggggc taccatgtga cagaggagct gtgtcagcct 27720
ggccacctgt gcagtggtgt aagtactaca agactccact gaaatctgag gcccaggtct 27780
gctgttatgt ttcccaggga ggcatgcaga gaaaaagtgg tttccctaat actgctcaag 27840
tttaaaacaa acaaacaaac aaacaaaaaa catggtggta cttgcctttc ataccagtac 27900
tcagacagca gaggtaggtg aatctctgta agttcaaagc tagcactatg ttcaaggcct 27960
gccagggctg catagtgaga ccctgtctaa aaaagaaaaa tgaaactgaa ccctgaagtt 28020
gtagaaactg ctcagatttc agtgagttct tttggactaa ctgaatgagc ttgttccagc 28080
gccttatttt ttctcatgtg gagctggcac atgagcaaga ctatccccag gctttgccac 28140
tacaggatca ccattgtgga taggtcatac tgttggtctg tgattttcct cacttaattt 28200
tcacaacaat ctcagaagtg ctgtcattat ctcctataat tcttcagagt cagaaaatga 28260
ggtacaaaga ggtaaaagaa ggaagatcac ctaactatta ggaagtaaaa ctgggatcca 28320
aagatgggtg acctttttctt ctagtgtaat ttgccttctg acgttgtaag gccagggcac 28380
agcaaaggag acagaagcag aagtgtgagc ccttagaatg ctaaaaagaa aaagaaagtt 28440
agagtgggga aagatctaga ctagaacagt tagacttggt ctgtcttctg aattctagct 28500
ttggagcccc cgcaaagact gcatgttata tacagcatag agttaaaagg agcacaggtt 28560
tctgcttaag aaagaatgtg agcttacttc attaacattc aatagtatat atagcttctt 28620
tttatatttc acacttattt atcttgtgtg catgtatatg tgagtatata cacatgccaa 28680
ctgcacacat gtggagatca aagagcagtt tatggaaatc agttctctcc tcctaccatg 28740
taagaccctg ggatcaaagt cagatcatca ggcatcagca ggagccttct cgctggtctc 28800
catatgcagt ttcctaaaga acaaggttat ccaagggctc tctcaccaca ggtgatcaca 28860
gttacatcac agttagcaag gccagaagaa tgcaaagaat gtctttattt ccttcctgga 28920
gcctggctcc tgccctccta aacttcttaa attttgttta atatttacat ctcttctaag 28980
atgtaagtac ttgtgatgtc tttaaatttc acaacaccca tgtgttccct ggtttacact 29040
acaagtaggg cagcatctct taaataatgt tgttctagaa ggaagagagc tcagatacaa 29100
gtagcaacct ggataggaat agcaattcca gctattggat actcactgga tatagttcta 29160
aacagtctaa tcagcagttg tgtgatcagt gggcacttag ggctgaatgg tagaagagta 29220
gctctcatgc caggaaatgc accaaactca ccagagcaag cacagacaat ggaggagaga 29280
caggtggctt gccccaagac cccccaggag cctaagatgg caatattgtc gttttgaata 29340
cattgtgcag gcacttggcc tctgggaggg aggaaaacaa ttagcttagc atcaaatcat 29400
gaactctgac aactgctcta tcttatataa gatctcctta cataaggatg cagagagagc 29460
atcctcatta aaacacctca aggggttcat actgattttc tagaagcaga gcttctctcc 29520
caacaaatac atcaggactg gctatagaca ctttttttctt caataggcta aaaagatccc 29580
acattcctcc aggagacaaa cctcagaaca gccacagagg aactgggctc catggtatag 29640
gtggggcatc taaggtccca gagcccacct ccatccagac tcagggagag aacaggcaag 29700
ccaaatctgc tggctctcaa tttggtttac ataactcctg actcctcaag tccctggaaa 29760
ctgaggccaa ttccctggaa gatcattctg ttctctcctg ttttttcaag aagagagcca 29820
gcctgatcac tggctccgaa gactgtgtga gagtgtccca cttccttctt ccacgaactg 29880
agtgtctgcc gtcatggctg ttgtttagga aggttctgtt tgaactctca taactccata 29940
tatgttgacc ttgtattata aagaacttta cttatcttat gtgtaccctc ctctgtttcc 30000
aaaagaaaat ggaggacttg cagcaaagga aataagtaag gtgaatacat taggagaagt 30060
gagagactgg gaagggaggc agacagaagg tgagctccca gtatctgtgt gcagagtagg 30120
caccagactc tctactgcag tatcgcaaca gcagaagcaa tcctacctca gagagttgag 30180
ggggaaggta agaaggcaca ttttttttta aaataacaaa cttgactgaa agttgaaaga 30240
tgtgttccta gtactaagaa cagtttctca tgtgaggttg cctttagggg cactgcatac 30300

acttgtagca atgaaaaaag atgtttatag gctctgtctt aaggtaaact tggtgagaat 30360
ggagggtaac taaaacaact taaggaaggc catgagtctg gggagcacta gctcttttgg 30420
agcctcagtg tgtcctgggt aaagttggag catccttgtg gtggcagctc gattggtgca 30480
ctaagtgcaa atgtgcacca agttctggac tcactcttct cggacacata gactgagtgt 30540
ggctcatatc tgtaatcaca gcactcaaga ggtggaagta gaaggatcag aagcacaaga 30600
tggaacaacc tcagctctat agacagttta aggctatcct gggctacctg agaccctgtc 30660
tataagcaaa tgactaaaca aacagacaac acacttaatt tttttatagc aaccactttg 30720
aagtgggagg ggtctgatag ggtctctatt gttcacagca agtgcacaag gtcaagagta 30780
gctaggcaga tgaagaagag gccaagacac ctgaacagta tctttcccat gggttcggag 30840
gagccacgtg ccaccttcac agtcagcatt gtctgtgcga gtagctctgg cagcatcagt 30900
gcccaaacaa cggctgatac gagtccccag atgcaagagg aaatagttgt ctgtaattgc 30960
ctgttttaag tagagtggtc aggaggctac agcctcctca tcgggctaca tgtggcatat 31020
gcaggcttgc tcatcagacc ttgtatttac tgttttcacc ttaatggaga atgggagagg 31080
caaacaaagc ccagggactt tgtggaagct gactagaagc ctctgggact ccagggactg 31140
ccaatctgct aaagaagaag ctaagaaaga aaatgagctc ctctgcatgg gtctccccat 31200
gatggaaaca gaaggccaca tggcacagtg taaatagagc cctgctgcac tgctcttact 31260
gtggtgaatg aagaagaggc aactagccag gagggcagga ccactactac tgttttgctg 31320
gctggttcct cccaagtgag cagccttccc tggggacaga ccttagctct aagacagacg 31380
tggcttcttc ggagcaagtc aaacctcaac atcgaagaat ccttgtcttg tcagttttag 31440
ctttaacaag aatagaacaa gcttctggaa caggacacag tggagtcagg agaagcggcc 31500
ttaagtgaag acacagctgt ggggtttcca gactcgcact gcagggaggc gtcatccagt 31560
gggagcggcc agcctcgctg tagacttcca acactaacga atcgggaact ccatgctgaa 31620
caggatttag ttagagggtc cctgtgccag cagatggatg tatttttctt gaaagaccaa 31680
ggtgccagaa ctcttcatga ttacgttact ggagcaaggt ccttttttgt ggtttgtgaa 31740
gttgagcgtc aggactgcag gattctcttg ctctttctta ctcttatttt ttccaggtca 31800
gaaccagagc ttggagcagg gaggaaaatc ctgctgaatg agcaagttct ttcttaaaaa 31860
gctcttcaag tccaaaaaga cttcagtgga cttaggagaa agaaatttaa tacattgcca 31920
tagaatcgtt gttaaccaag ttaaagcaaa gcccacagca tctttgtctt ataaaagaaa 31980
gcaaagagga gatggaaaaa aagaaataat gcttaggaaa tccaaaccaa acaatgaaga 32040
ctaacgaagg aaaactaaag atcacttcaa agaatgtgaa gattccctcc taataagatt 32100
tttcaatttt caaacctaag cttcaggtgg gaggaccttt tcagtttttt ttttttcaa 32160
gtatgctgtt aagtggcatt ccccaaaatg ttggccctgt gtaggattgg ctgccttcca 32220
cataaggagc agtcagatac cctgcaagac ccaggaactg agggagcttt aaccatggga 32280
agctgagagg cttgccagac tgctccttga cctgagcttg aacctgagtc ctaactgcta 32340
gcaaactgaa acaagcccag cctccaggag aagaaagtgg gcggaactag agcagtccta 32400
gccagaaaac tatgctcctt tcaccactgg ctctgtcttt acatccctgg gagggaagcc 32460
tgggttgggc ttcaagatcg cctgctcaga ccatccctct cacttgctag ccccttccag 32520
gcccacgcag aggcactagt gcctatgaga ggtcagtttg catctgttgt ggacaagaca 32580
gggaattcct tgacattttt aatatttatt tatctttgtt agtgtgtatg tatacacaca 32640
cacacacaca cacacacaca tatatgcaca aatgtaccaa caaaaagtta tggagcttgt 32700
gggggggagtc agttttttttc ctttcaccat gaggattccc agaattgaac tcaggtcatc 32760
agactagaag caagcatcct caccaactca gccttctcac tataccttgc atagagtttc 32820
tcaacttttg cctaagctca gactggtagt tttttgtttt tgtttttaaa gatttattta 32880
tttattatat gtaagcacac cagacacacc agaagagggc atcttatgtc attacagatg 32940
gttgtgagcc accatgtggt tgctgggatt tgaactcagg tcctttggaa gtgctcttaa 33000
ccactgagcc atctctccag ccccagactg gtagttttta aaagcaccag aagttctgag 33060
cttccatctt ccttactcag tgagtttaag aagcacctgc ctaggcatga tattctccag 33120
ggcaggccat ttgggcaggc cattctgtac atctgagcct gtgaaagact ggcttgttca 33180
ttgaccccaa gagacacctg gcgtgcacac tgaccaccct ttcctgtttc attctgtcac 33240
cttctgttgc ttattcttat gaacgcattt gaatccactg acttcactgg gctgggatcc 33300
aaagtaaggc cacgtgcctt ttactcatca tagaaaacaa ctataggcct cctagcctcc 33360
tgcttagcct tggacattca ttctctccct agttttgctc acaacatggt agaatctgag 33420
acccaaaagg acgcccttta tttcctcagc caactagtag tgtggttcct gggaggagac 33480
actgctggtc tcccttgcca ctatagtaaa acccaagagg tgcaacaacc cccgaagagc 33540
ttgcttccta ccttccccaa atccgtggga aagtttgcca tcctgtccca agggtttcag 33600
cctttattta actcagcctt agtcctatgg ccagatgcct tgttcacccc tatcatggag 33660
cctggacagt gaagggcccc atcagaagtt ttatgttctg ctgcccacag ctgctctcct 33720
gtgtggtctc agcctaagtt tctagaaata aaaagctctc tcactctcac acatgttcat 33780
tctctctctc tctctctctc tctctctctc tctctctctc tctctctctc tctctctctc 33840
tccttccttc cttccttcct tcctttcttc cttcctctcc tcccttccaa ctccttccct 33900
ccttcctttc ttttatttct ttttgtgaag cagagtctct ttatgtagac caggctggcc 33960
tcggattcat aagagatctg cctgtctttg cttcccgagt gctggaatta aaggtgtgta 34020
caaccacact cagaactctt ccatttctac ctaaagaaga cctgtttgtc ctttgtcaag 34080

ctgagagcct ttcgtctccc taggtccctt tcaaaacttt attcctgtgg caatggccta 34140
gaagccaatc cctttgagag gacccactag cagtcagtgc ttctgttcca tgtagcagct 34200
gccaccagag tggcttccat tcctgctggc tgacttccca ctgaggggg cctacagagc 34260
ttcgtatgtg ccccaggctg gcagagaggg cagcaaggaa ggctctgttc tggcaaggct 34320
tatggtatag gaagtatcta ggaaatactg ttgctcttca gggtgctgac aagataggag 34380
ctctttcttg cttcccgggg atttggaccc ctagtttcag tagagctggt ctttgttgac 34440
tgtctctgcc tggatgtcct ctgctgtagg tcttttgttc tgcttctctt gggaattctt 34500
ctgcttgctt tctggctgga ggtactggta cagctgcact agcctctata ctcattgtac 34560
acactccct agcttgtggg cctcagttga gtcacacatc ccttcatgag ctggacactg 34620
ccagcatgga tatctgttca gcaactaaaa ggataggcct cccttagcac tgtcaggtcc 34680
aatctttctc tagagattgg gtctgctttt ccctgcagcc cctggatggc acatcattag 34740
aaagaaggac atgccttcca gtgctgcctc tgtttctgct tacagggata agtatgttta 34800
ttcattcata ctgaactttg tacttgtagg cacctccatg cctgtagaca tgcctgatgg 34860
cttgacttct ctgagaaaca catcactgtc ctaggtagat tttagaactt aagagaatgg 34920
tacccacctt gtcccatccc tacctctcca ctccttggct tttctttgaa tattttaatt 34980
acctgtccat cctaaggtca cacacagtct aatgtctgga cacagttcct cccacctctc 35040
tagagtccat aaatacctag gaagccagta cagctttaca aagaagactg cttcttctga 35100
ctggccctta tgggcctaat acataccaaa tctctcaaac acagtgtagt gtgagaatct 35160
aataagatca tatgaagaat gtttagagca gatgtacttc ataaatatta gtttcctaca 35220
gaacgtctgt cactcagacc ctctgctttc tctcagttgg gctgcatttc tctctcatgt 35280
ctgtcagtac ttagttccct ggcccgtctg tatccatctg ttgtcatatc gtattgccct 35340
cccttgccca ttattcatcc ctcaaacctt tctggaaaga tccagctttg gaccagcttg 35400
gctttcttct tcatactact gtcaaggctg cagagggttg ttcactaatc ctagctactg 35460
agtgctcttt ggtggtcctc ctgcgtggcc ccatctaggt cttcgtcttg tcctccaaag 35520
atttgactgc aaccttcatc ctttcctcaa atttctaatc tctcaaactc tccattcttt 35580
gcagataatt tgactttcta gttctcagga ggacagaagc catgctagaa agttctaaac 35640
cctccttacc tggcctacag acctggctct gtccctgctc acccctccca tctctagaga 35700
aggtcttcca ttgtgtgttg gattccagtc cctggccatc tcagaagcaa cactgtttac 35760
tccatctctt gggctccctc tcctactata gtcaattctg ctttaaaatg tcactactta 35820
tatgtacacc tttcactccc ttactcactg tgctgtccca ctgtagtctc tgctgtctcc 35880
tccctacagc catctaaagc cactttgacc tctgtttcct tgcttctcac tttccaatct 35940
gtctcctacc cacctcagct cccactacta cttccctcca gccctttctg ccagatccag 36000
tggggtccct gtttgggaca cacactcctc tcctatgtgg cattttagga gggtataaca 36060
aactgacttg gctcttcctt ccttaagaat tcccccttag cttcttcaag acataaatca 36120
agacccacag ccacccttct tggtctctgc tcccagatct ctcatggagg tgttctttgg 36180
actccactag gatcttcttc ctcccatgca ctctctcaag acgatctcac ccactgcagc 36240
tagctctcat cttgccagtt gaagcctgca cattcacttg gaccacacat acagcagcct 36300
tctggccatc cccaccaaaa acaaagaaac caacagctcc aaataggacc caaactcacc 36360
gcccaagctt accatcccgc atcacctgca ggagtggcct caccatctgt cccaccatct 36420
gaagcagaga aactgtgaca cctccattcc cctgcatatc cagaccagca aagttccata 36480
atgttcttag caatggacaa agagagtgag tttgagttaa aactctagtt ctattgtgct 36540
gtggacaaat tccttaagga tttgtttgta tgagtttgtt tgtgtgtgtg tgtgtgtgtg 36600
tacacatgtg tgtttgtgta tatgtgggta tatgtgtacg tatagagatg ttcttgtatg 36660
tggaagccaa acaacctcag gggtagttcc tcaggtgttg tccactgctt ctcgttgtta 36720
ttgtctctca ctgttctggg tttaagaaag ctagactggc tggctactga gtcccaggat 36780
ctgcttatct ctgcctcccc aacactatta caggcatgct cacagatgca catcatacct 36840
agcttttaaa aacatgaatt tggggaatca aattcaggtc tttttgcttg aatggcaagt 36900
actttaccga ctaagctatc tccttaacct ctctcaactg agctatctcc aaaggcatac 36960
agacacacac acacctctca acaggatctc aatatgtagc ctaggttgtc ctaaaaactc 37020
taacccttct gtctcagaat cttgagtaca aaaactgtgg gtgttcatta ctgaactcag 37080
ttaaattctt aatctttatc agccccaagc tctgcatcca ttaaatggaa attataacac 37140
ctaattcaag tggtcatcag gataaaggaa agccttcttc acttggtgtg tgtttgataa 37200
taaaagtatt taaataaata aatattcaat aactgagtgc ccctctgtcc ctctctccac 37260
caatcggact tgtcttgttg ttaaattgct gtttctatag ttttctgacc ttgaagccct 37320
ccccctcaag atcacactta ccagtgtttt cctgactgag gaccacagtg cctgtttcat 37380
ccctcctttt tttacttttg gggctaggag gcagattcta gagtccccat tacagggttt 37440
gatgtgtctt ctctctaagc tgtctctaga tgcccccatc tccacaaccc tgcctgagac 37500
ccaggcctaa tctttttagt ctgccatgat ggccttgccc aaagcccttc tcctgcaggc 37560
ttgccttcag tttagcccat ctctcgctga ccaccaggtg tcttgtcctc tgacacctgc 37620
tgtgctttcc ttttcttttc ttttcttttc ttttcttttt ttctcttctc ttctcttctc 37680
ttttcttctt tctttctttc tttctttttt ctttctttct ttctttcttt ctttctttt 37740
ctttctttt accatgtgaa ttcctcatac tcttacatgc agcttgctgc attagctcag 37800
ccctcctgcc tccctgaagc agcctgatat cgtcctcctt gatctcattc ctcccccccc 37860

```
ccatgttcct ctccccccc cccctccacg atacagagga ggaaagcatt tgggagtggt 37920
tgagaaactg aatctcggta cagcgaccag taggatagac tgagacattc agcaaagacc 37980
aactctactg aacccaggag ccaaaaactc tgcaaaacaa gaaaaatgta acacaagagt 38040
gggggcatgc tagtctttac tcaaaatcaa agtagagcta ccttgtctcg aagaatctag 38100
aaaatgccaa taaagtggag aatcctccca ctgggctgtt tctctctctc tctctctctc 38160
tctctctctc tctctctctc tctctctctc tctctctcac acacacacac acacacacac 38220
acacacacac acacacacac acacacacac acacacacac acacacgtct ctcccaacct 38280
ttttgttttg gtttggtttg gtttggtttt tgtttttcga gacagggttt ctatgtatag 38340
ccctgactgt cctggaactc actttgtaga ccaggctggc cttgaactca gaaatccgcc 38400
tgcctctgcc tcctgagtgc tgggattaaa ggcatgcgcc accaccaccc gctctctccc 38460
aacctttttgt tgatctattt ttttgtggtt tccttagcat gcgatcaaat gtatgagctg 38520
ctttatctgc ccaccccacc atggctacct gctctcccac atggactgca gtgggacctg 38580
tcatgcttcc tgacttttgc taccaatgct ggtcttatta ccaatgcagt agtgatactg 38640
aggcaaactg tttggcagtg aaacctttct ctaagccaca aatccatagc ttaaaatatt 38700
gaggcagaag atgcaaaatt ttctaagagt gtaggttttt ctgtttgttc atttgttttt 38760
agtggacaaa atcaatacac tgcctcagct agaaagaaag aagtgaggca aaaggtcata 38820
gttgtgatta aatgttgttg taattgatct gctatacagt gggttttttt ttttgttttg 38880
ttttgttttt ttttttttt tttttgcttt gtttggggat gtttcctttt gacacagaat 38940
ctcaggaggt agcccaggat ggccctgaac tttaaacctt ctgcctcagc atcctaaatg 39000
ctagaaccaa acacatgtac aaccacacct atctacttat gtactaatta taccaaataa 39060
tggatttgcg ttgccctttc tatacacgtg tacttatact tcgatggtca tgcccatcac 39120
tgtgtcttgt tcccactccc ctggcccttc caaaatagtt cctctcctct cctctctctt 39180
tttcatctag attccatgca tgagacagaa tatatttgtc agtctaggtc caacttattt 39240
cacataacaa atgtcaaatt ttcaaatgac aatttttttaa ttcttgtttc ttatttcatt 39300
ttcctgtgct tatacatgtg tggtgcatgt ttggtgggtg tgtgcatgca gaggcttggc 39360
agtcaccctc agctgctttt ccacgtttct ctctgaggca cagtctccca tcacgtccag 39420
ggctcactag tatggcgagt ctttcaagcc ggcttgcact agagatcccc tctttcctct 39480
ctgggatagg aattctcggc atgtgtgtga gttctgggga gccacctctg gtcctcatac 39540
ttatgcaaaa agtgttttaa ccacttggca ttctccccag ctctcattcc tttttattgc 39600
tgaataaaac tccactgtgc gtatgtacca cattttctgt atcccttctt cccttgatgg 39660
gatctagact ggttctgtag aagtgccatg aaaactgctt tggtacagat cgatgtctgt 39720
gttgtgctga ctttgtactc ccttcagaca gatgtccaga ggtggtagaa ctggatcata 39780
ggatagtgct attttctctc tctctctctc tctctctctc tctctctctc tctctctctc 39840
tctctctctc tccctccctc cctccctccc tccctccctc cctccctctc tttctttctt 39900
ctttttggag aagcctccac actgatttcc atagtagctg aactaaattc tttttaattt 39960
aactgaaata gaggcctgct tagagccaag gtataatctg taagaaaagc ctttgactcc 40020
agtgaagttc ctggctttgt tgtggtaaag aagcatttgt ttctagtttg agtgttcatc 40080
tgggtcagta agaggacaga ccattcccaa gagtgtgctt tgctctgagg gagagaaaaa 40140
ttgtccagta tctaatggtg caaatcatta gttgtgttaa taaccctaca ggggaaaaaa 40200
tcataataac gtatcccccc ttcatgtact taatgtagct aaattttccc taatgagtta 40260
aaagtccatg gaatttttgg agatagtaat tggctccaca ttggaaatgc tcaagctccc 40320
tgagccctgg gctccagtaa gacaggtagt aaacctgcct gagccctatg aagccctgtg 40380
ttcacctgag gtctccttgc cagagtccca aaagaaacca ggactcagca ggttgtcttt 40440
tcatcttcac ttacagggtc gccaagtcag tgtgctccta acctaattct gaactccctt 40500
ctttccccca cagtgtaata tttacctaac tggttgttca aatcaaacct tgaaccttgg 40560
ttctcctttg tcaccatatc catcagctgt tgattctact tctaaaactc actgccactt 40620
agatctcccg agtgtccatt tctcttcatc ctgcctacct gccctctggt ctccactccc 40680
attcccttag gaacagccct gtgtaggctc ccatttctct cctcttcctt cagacagcac 40740
agtagccagc taaaagggtc ttcccaaact gaactgtggt gacatcatcc acccctttct 40800
tagagcagat cacgatcctt cctttgtagt taaagcaaag gtcagagtcc aatatagcca 40860
agagtgccat gcatattttg cctggccttc cttccacagt gaaccaccca ctgtgatcct 40920
tgtagctatt ggacccagct tctggccatc cttcagttcc tgcagctcct gctcaggacc 40980
tgtgtatatg ctgtgacttc tgcccaagac aactgtctgt tccctcacct gtgggctcat 41040
caccctcct tcccacagcc ctgttctgcc tgggtcagct catttgcttc tctagaaaca 41100
tggtaagtta cattttgcct cccataaaga ttccaagaac cctcttcagt tcaaacttct 41160
acatatacct ggctgttccc tacaatagag gtttgctctt gtgacagaca gcaggctcca 41220
caaaggtgac cccactgctg tagtgctcct gtgtcctctg ctagctcaga ggcaggtata 41280
aatgtgcttt ccgagtacga attacatggc cagtgcataa gatgcccctg gtggcagtac 41340
ctgtggatgg cagagctcca gtgacaggac tctgccacag tgagaggttg gcgtttccac 41400
agcacatcca ctgcagggag ctgacttgtt tgattctccc tccgttgagc ccaaactcac 41460
tggtttttct tttctctttg tttagctgaa gcttgctttt actctggacc atgagactgg 41520
attgcctcaa ggatgtcaca tctatgagta ccgagacagc aacaagtaag ccactcactc 41580
aggggaaagc atcgcctact tgctgagcag ctggggcagg ctttctgact cgggcttccc 41640
```

ttacaggggt gctcaacatt tttgctacat gtgagaaaat gtctggcaca cacatacaaa 41700
atatccaccc caaaagtctc ttttgacctt aaatataata gaaaggaact tgtatagagg 41760
gctagagcaa tggctcaaag cacgtactgt gaaagtgtaa ggacctgagt tttaaccccc 41820
agaacccaca taaagccagg ttcaatagca caagtctgta accccagtat tcctacggtg 41880
aaatgtgaga aagagagaag agagtccttg aaggtcagat agcctggtat acagaaagcc 41940
cctgtgccaa acactgtgga aggtgagaac cacattgaag ttatcctctg attccatatt 42000
tcttcatggc acacactcat gaacatttgc acataaatgt gtgtgtgtca caccatacat 42060
atacaatcat acacgcatgc atggaaataa agcaggtgta aaagagttgg ttaagagtaa 42120
gaagtgtgtt aggaaaccag ccctcctttt caggccccac cctcctcccc acccctcccc 42180
agtactcgcc ccttgcctgc ttatctgagt cagctgtgac tttggccttg gttgtggttc 42240
tgtagccacc gactccccac ttactacttc tgtagtgatc ctgtggctgt gtagttggga 42300
ggtggacaca gatgcaaagt agtgtagccc tgttagaaaa tggccccagc ataattttaa 42360
agtacctttt ctctccttca aagactgatt ctctgagtgt gtgttgtggt gtggtgtgag 42420
acagggacag tggtggtgag tgaggcagaa gaaatatgcc ttgataatgc tggtgctggt 42480
ggtggtagta gtggtgatgg tggtggtggg gtgatggtgg tggtgatgat ggtgatggtg 42540
gcagcagctc acatttgggc acctgctctg cattagactc atgggaacca gtgtgtgcca 42600
ttcctactta accctcatca cagcctgaag agtgctttca ttactatgca ctgcagaagc 42660
taaggcctag ggaactctgc cagctcactc taagtaattt acatacacag tcaactttaa 42720
catgtctaca gtggaggaag actaggtgga agacagttgt taccactctg ggaaaccatc 42780
ctcaataacc agtagaccca gcctagactt gagaacagtg tgttctggta tcatcatata 42840
actatctaaa ctatgtaatc tcacccagct gaaggaatag gcacctgcca gcatagccag 42900
ccatgacctc ccagaagaac tcactgctca gatgtgagta gaagataggt cagtgttacc 42960
cttgtgacca catccacatg caggttgcct tctgggtatc attgcaatgt ctgtatcttt 43020
aggcagatga tgtacttatt attggacaac actaattccc acttcatgaa ccatggagaa 43080
ggccatccag tcatcctcaa tgcctctatc tcccatcttg tatggggcta catctagaag 43140
gcatcccagt gcttctaaag ccattgtgtc aaaaatacca tcttggtttc ttattaagct 43200
caggtcatca gcaaagtcaa tctgggattc tctgaagcca aaggcaagat gggagaactg 43260
aacagattcc tgagtggctg ggcaagcttt cttagagact aagcacataa cccataaaca 43320
gtacagcata ccgttctgct tcccttccct tgctccacac tgttctccat gcctcggccc 43380
tcactcttag cctccaactg cttgtcagga tgctctgttt actgttagtc ctctgcagaa 43440
ccctcttgcc tttcagccac cagccagcct cacaggtctg cacacggtac cttccagagc 43500
ttcccagtga tacaaagcca tcttcccagg tcatcctggt atatttgagt tattggaaca 43560
actgtttgtc cacagaccct atccatgccc acataccact tagcggcctc tctgtccagt 43620
acttatcagg agactggcag ggcagccata ggcctctctc tgtacaagcc tgaccactgg 43680
gaaggaatgg agcatctggg tagggactcc caggctgcac ttacttttaa gtcatttcag 43740
ccagtctatg ggaagcctca gtgccaatgc cctttggagc caactcccct tctttagggc 43800
ctggcctgtg tctgggctct acacacatgg ggtaatgcta gatgactcaa gacattcaat 43860
aggaagaggg ctccaagaca gctgcagcat cagaactgag cagccacgtc tgggactatg 43920
gcaggggatc gaagtgtacc tttccctgtg taccagccta ggcgggggga gcaagggatt 43980
ctggaccaag tcccatgttt aattaattca tccctctgtc tacttgattc ttctcctctt 44040
ccttcccccc gagcaagctg atgaaatatt tcccagcagc ccctgacaac ttcaaaccaa 44100
catcagcact tgccagcact tttgaaatgg cactttctgt ctgtgcttag agctattgcc 44160
agttctgcag actaactgca gtgttaccta agagccactc ctgacagagg gtgagcacct 44220
ctaggcctcc cgcaaataca gacgctacca ggtcaaaaca aagaatgatt ttcttgttcc 44280
ttgtaaagcc ccaggtttgg agaaagagaa gctgaatcaa ctcagagata ggaagggctt 44340
gcagagctgg aggcagcaga gccatagaag tgccaaaagt gacctcatgg gaacagttgg 44400
agctggagca tacatgtgga gtcagccact cacagtgcag gggtgggctt ctgtgaccct 44460
cacagcaggt ggggtttggt atctccatga caccaacact cctgcttcca agactgagct 44520
ctgagatgat gtctccccac tgtctaccac acagaggggt agccttggct cgtcctgttc 44580
ctgttaccta gcatgagaca ccaacagcag caaccagagt atgctgggtg ctaaaataca 44640
gtgtttgatt ccacttggtt cccctaacag aaggtaagaa accatacatg ttcttacttc 44700
acagaaagaa gaacctgtga tctgagagat gcccttccca aggttgtatt taagaagcag 44760
acaagcttct tccagggtgc tgcttcctct atgaggtgca tagcagactt gggcccagcc 44820
tgtgggtcta cagagatctg atgccaagtt gcctaggaat ctgggacagg gaagtcagca 44880
ggactagggt tgctgctgcc ccatcagggt ttatagtacc tttatgtatt gtgtgcggca 44940
ccttcatagt cgctgtctat atacatgtaa tctgtatgtc caagatattt attaggggggg 45000
ctaactcagc atcatttctc aatgaagttt cttaccagag gtttcccata ctgacaagct 45060
tgtacttggc tgttcagaca ctgtttccct tctcaggcca gaactgttta aagcaagcaa 45120
acatgaaagc cagaaaaatg agctgattgt gtgctaacca cagacccttt ggtacatgca 45180
tgtacatgtt ccagcatgca gaatgacaca ggcattatac tgttttcttc tgtggcgtac 45240
actagaaaaa aatgtataca gtaaactcac tttgtaaaac ttactttgaa accattatgt 45300
gcagagagaa aagctacaga ccctaagtgt gtatagttca aggccatggt ctccaagtca 45360
ttgttctatt gctgtgcaga gacaccatga ctaaggcaac tcttacaaaa gagcatgtta 45420

ctggggactt aattagtttc agagggctag tccattatca tcatgtcagg gaacatggca 45480
gcatgcaggc aggcatggca cagaagcagt ggctgagagc tacatcttga tccatgggca 45540
gcaggcagcg agagatgggg gaggagagag agagagacag agacagagag acagagaaaa 45600
agaaaaacag agagagagat taatattgat tgattgattg attctggacc tggtgtgggc 45660
ttttgagatc tcaaagtcca tcctcagaga catgctgacc taactcacaa agccacacct 45720
cctgatctta ccaaacagtt catcagctgg ggactaaaca tgcaaacatg tttatggggg 45780
ccattttcag tcaacccccc acccacagca gtattagaaa atgaacttag ctgagtggat 45840
cccataagcc tgtagaatag cacttaggag gtagaagcag gaggatcaaa agttagggtc 45900
atccttagct acatattgag tttgagacca gcctagactt caggagatac tctttctttt 45960
ttttttttct taatttattt atttattata tgtaagtaca ctgtagctgt cttcagacac 46020
tccagaagag ggcgtcagat cttgttactg atggttgtga gccaccatgt ggttgctggg 46080
atttgaactc cggaccttcg gaagagcagt cgggtgctct tacccactga gccatctcac 46140
cagcccgaga tactctttca aaaagaaaaa aagaaaaaga aaatgaaccc aaacacactc 46200
aggtcaggaa atagactatt agagcccccc aaacacacac atactccatc catcccccat 46260
tcagaacctt cttcacatct ccaaaaaaat ggaaccattc cacaagtctt agtttttctc 46320
tgagtgttac atttgggaga atccattgtt gtatatgatt gtgtcccttt gttttcattg 46380
ctacagaatt ttcctttgaa aagctgaaga tataggacag tgatagagca cttgcctggc 46440
atgcacaagg ccccaagttg ggtctctaac agagcgataa aataaaatat tttgagaaac 46500
tacaggaaat ttttaagaaa atacttatat cagttcattg agaatttcat atactatatt 46560
ttgatcatat tcacccccag ttcctctttc taacttcccc acctccctac ttcccccatc 46620
ttcttgtcat cattgttttc tccccccctcc ccccctcccc ctccacctcc tcttcccccc 46680
cctcctcatt cccttccttc ctcctcctcc tcctcctctt tcataatgta ttgactctaa 46740
tttgttctgt ccatatactt ctgggtgcaa attgacttac caagagctac acccctaaat 46800
acaactgatt tcatttctat cccagaagct ctcaactgtt cataggtcct cagctaaggg 46860
tgaaggctca taaactctgc cccagtccat gacagagtac tgcctaggct tgatcttgtg 46920
caggtcttat gcaggtgaga tggctgctgt gagaccgtgc gtgcatgtcc ctgtcatgcc 46980
caagatcctg cttcacccct tgaattctgg gttccctgac ctccaactct ctctaagata 47040
gtacctgagc tttagaggtg ggcttgatat gtatgcccca cttgtggctg ggcactccag 47100
cgatcaccgt ccactgcaca caagaagttt cccgatgagc tctaagagct gtactaactt 47160
acggatacaa aggcacagat ttagagggca gttaggctgt gtcctttag caaaataata 47220
acattggcca aatttacaga accagatatg tgctgcctcc ggtggaatgg gcttaagttc 47280
agccagtaag tgactggcta cctcataaca tttgtggcac tactgcacca tgggcatagc 47340
ttaccaccct ggtcactact gcagctcacg gggctcacag cttcctttct ctgatatcca 47400
cactattgag gactattgaa tattattgaa gattttcccc acagcagcct gcagagtatc 47460
tttgagtatg gtgaaggtta aacagcaggg aggaagcttc ttagtaccaa cttgatttct 47520
ccatgtcctg tgatgggcat gtgtgggtaa gcaatagggt cttatcatca tgttctggta 47580
ggcaaccaag ctatgaaagg cttttagagc tgggtataat gtagttccag catttaagaa 47640
gtggatcaag agtttaaggt cacccttggc tacatcatga aattgaagcc atcttgagct 47700
actcaaaccc ttgtctcaaa agcaaaacct gatcatctat tctgcattaa tctaatcagc 47760
gttctgattg tttctgcggt caagttatta cagataaatt tgtttatgct tttgtgtgca 47820
catgcatata ttctgcttca gtgtagacct aggagtaaaa ctgttcatcc tacacaattg 47880
tatttagcaa gtagcaagag ttcaggcctt ttctaacttt ctgcctgatt ttccagtttt 47940
tctcctcatt gtgtttttct gcctattcag gatatgaatc ctttgttgac tgtatatatt 48000
gcacatatca gcctagagtc agacagtaat gactagagaa caaagcaacg cctaaggcac 48060
tgcagttctt tcctggagga atagaagtta acagcaccac tttctggttc ctggtctctg 48120
gccagccagg gaatccctaa agctttgatt ctgttgattg tcactttgct ctaagattat 48180
gactaaggaa ttgagcttct agaatcagtg accagagttc tccagatttg ggatagccac 48240
agatagaatc atcaatgaac tgttcttttt ttcttttctt ttcttttctc ttcttttctc 48300
ttcttttctt ttcttttttt tttaatcaaa agtgtctttt agggacctaa ctttatggat 48360
gactcttcag ccctttccac tcattccctg tgtggtgtca tacctctcag ggaaaccaat 48420
caggagagtt gaattctgga ccccacttaa tcattacaag agatagtaag gaaattctta 48480
atgcatatac caaatgaaca tgctaaagaa actggtgatt ctgcagttat gcatggattc 48540
agaaatctgt aagcccccag agcccagaac atttaatgtt ttggagttct gtgattgaat 48600
actgaggatg caacccccaa gattacaaag gtctccctag aggagaactg ttaacaaacc 48660
acaccagtat gtttgacatt tgctcctttc tccagtaggc ccttcctcca atgccctatg 48720
gtgctctcat ctgccccata tgatatcttc ctttctctga tatccattgc caaaatgctt 48780
tgtagcacat ggtgacatgc tctcaccacg tggggaaggg gttaatggta atcagcatct 48840
ttactgtctc tgaatctata gtggtataca cagctatact gttctctcaa tttcctggcc 48900
tgaccaagtt gcttcctttg ccttctctgg gtacctgtgc caggcacaca tctctggcgc 48960
ctatacagac acacatctgt aacccagagg tgctccagaa ccaacctcta caagcacata 49020
gtcatccggt agccttcaaa cccaaggtgg cttgttcctc tctaagactt caagaaatcc 49080
tagagaagct gtgatctttg ggcctgtacc ccattgaatg aataggccac acattgctgt 49140
ccagtagaca gtgagccaca gcctctctct accagtatgc tggaccagac actaggcaca 49200

ttcacaaagt gagagtgtca agtgtgtctg ctctaatcac ccaccccagg catcagaggc 49260
ttgtgacact cacaggttag ccctccagga agcaggccac aggacttcag gttgagcctg 49320
gagaaaggtg cccatggccg tcacctccag cagctacttg gcaggtaacc agaacatgct 49380
tggctcactc agctcttggc tgtgctcccc agagggaagt gtttctaatc tgtcgtcact 49440
gctgctccca tatactctga ggcattgtgg ctttttcttg gtggttgggc aggaagcctc 49500
cagagcctaa aggaattgcc atgcttgatg acagacaaag gctattgatg gctataaatc 49560
acttagctgc tgcctggctt atttaagagg aagaggacat gttaactatt ctgaggatag 49620
gccttcctgt ggtgggtacc caactgaaaa gggatctcac agattgactc cagctgtgcc 49680
cgctgagtta agtggaagga aatgccccac ttagacatga ctttgcaaag ccaaccagca 49740
aatcatccca ttgacttgta gctccacctc actgggcatc ctcaagtgac ccaccttaag 49800
cagtgttggg ccaggatcca aggtgaggaa gccagaggct gactagctgg gacggcacca 49860
cattgagtgg gggctgttct caaggaggca gatctggctt agccctgaat gtggagactg 49920
tgctatcacc atcatgtccc tgaaggctgt ctagagctct ctgattctgt agtcatgcct 49980
cccttggggg aagtgctcc 49999

<210> 12
<211> 38886
<212> DNA
<213> Mus musculus

<400> 12
actcaccgac cggggctttt gtctccaaag ctgagacatc tccatctatg tccttcttgt 60
tccttatttc ttcacataag acactgtgac caccttctcc tgggtgtgtg acctagcttc 120
gttagagctg tttagaattc gagaaataca attgtcttgt agttttcact gggagaggtc 180
ataacctttg cccgttaatg tatatatcct cttaatgaca tcagctagac aaaactaagg 240
ttttaataac tgaggattgt tcaaaatatt tatgttatgt aaaaagtgtg tgggtgtttt 300
tacagtatgg agattgaacc taaaagttca tacatagcag gcaagtgctc cacgagctgt 360
atccttagct atttttaatt ccttattttg agacaaagct tttctaaatt tcccaagctg 420
gcctagttat ccttgacctt gggatcctcc tgtcttagtc tccaagtaag attacatgac 480
tgctgtgcca tgcccagctg aaaatgtttt ctactgagtc tcctacactc tacacagcca 540
ttttccctac agtgagtgac cgcagagtca cagggttttc ccttgacttt actgaagcct 600
tgccctgtgt gtctttgtct ctgccctgat gactatcaga gcagttgtca cctcaccacc 660
ttctatgtgg taactgtgaa cactaggcct tgtggggaca tagaaccata gggagagagg 720
caaatgttag aattctcatc ccaggtgaga gaaggttata gttctgagcc aagactaccc 780
tgggtgcacc atacagcaaa gtgcctgttc atgcagacat gacatgtttc ccacagctgc 840
ctttgaggac acctcctagt tctgcaccat cttcccctct ctgagattct gtatgtttgt 900
gttctacatc tgccaactaa gctaaactga ctcaactatt agatgcattt tcctacccca 960
tcccatccta taccacccaa ctgcacctca tttcccccat cccaccccat cccatcccac 1020
tcctcctccc tcccgccaaa tcccatcatg aagtgcctcc ttccctggag cctagcaggt 1080
tgcccaccac tttatgctaa atatgtgtcc tctatccttt agtataacca gactagtcag 1140
gtggtcacca tgttttgtgt aaggaatgcc attcatcact gttctgctca tgaaacagaa 1200
tgccctttc actccctctg actttctcag tgaattttcc agtgctgatg tcatcaaact 1260
tgactcccaa tttttaacaa ccctcagtct cagaactacc agtcccctgc tgagtacttc 1320
aagaggcggg tcttgcctct gcctgtgcaa ctcagtggaa tgtgaatgct tttgactgtg 1380
aggtagagag tgcatattaa gaggctttgc agattttctg tagattctgg ttcccagtac 1440
ttagagcaga cctgggaccc agccaggggc tgctgaggag tttgtagcac tgatgaagtt 1500
ctgaacagtc cctccagcag agctagcaca ctgcggatgc tcagcagaca ccgggtgcac 1560
gcctctcctc gcaagcatgg attgcttccc ctgcatcctt aatcttagca tgatgcctcc 1620
gtttcttcta aagcaccagg cgcccgtctc cttcacttac tctagatggt tctcatggtg 1680
gaggttaaga attccccatc tgaactctaa accaaatacc ttatgaactt ccaagtttta 1740
gattttagag catttgagat tttatgtttg tattccagag cctatgcaaa tattcacaaa 1800
tctgaaaatg aaatctgaag cacttttggt ctcagcattt cagataagag gttaacagcc 1860
tgtatgctaa tcatatttat ggaatactta gcagtgtgtt ggcccctaag ataagaactg 1920
atgaaacatc tacaccttcc tggaataacc tgagattcca cagaccctgt ggtgtttgga 1980
gccccattcc tgtgcccatt gagttaccaa gaccagaaaa ccactattgc cattgggctc 2040
ttgggaaata aaggttccat tcacataagg atgcccactc cacacctacc accatcattt 2100
ttgcagtccc ttcctgttca ggcaagctca ccatgggagc caagccagtg ctgttcagat 2160
cccagtagca atatccacag ccagagagat gcagaagtca tataggcaag agcctatatg 2220
cggactgtta cataccagac agttgtgtcc ccactgctaa acctagagaa atgttccaca 2280
aatggcccag attgcaagaa gaaccctggg aaattctacc atgcatctca caaattagaa 2340
gaccagtcat tgtgtgtatt gtaagatcaa tgtaaacctc atgcctttgc ttgtctagct 2400
agagccaagc actgtgcagt gcatggaaac aataaaggtc cagagaaccc actgagggag 2460

acaggcatgg aaagcaatat ttataacaaa tacttagggt ggggcatgat gggagaaatg 2520
tccttgggct caatcagctc atgatcagat gagcggtgtg gtggaaacac gaggtgggag 2580
cagcacaggt cacccagctg tggccagaaa gcagcaaatg gcaagaggaa ggggccagga 2640
acaaggtata gaccccaaga attcccagaa ctcaggccct gaagtgcccc ttcctcctaa 2700
atactctgcc atcctccaaa acagtgtcat cagcaaggga ccaggccttt aactcatgaa 2760
cctcgggggg gtgggggggg cggcatttca tgttcacacc ataggggtga caaaggagtt 2820
aggagccagg ctcccaggat gcccagcctg ggaaggaaag tacatgcact gcttctctca 2880
gctggggcct cattggacag gcaagtgccc tgtgagcagg tgtcaggtag gagcctgtat 2940
tttgacatgg agaggacaag gcaggtgcct gggtgctgcc aggtggaaag ggcaaacggc 3000
ctgtgtgtgt gtctggtgca gtccaggcac gtgcagggga agcccagaac tcgctggatg 3060
ggaacacacc catctaaagc actctgaacc cagttcataa aaccatgggt caatattttc 3120
aaagtcacag aactaatgag ctctgccaga ctcaacagac cgcatcccag tgggtgataa 3180
gacaagtgtt agcacagagg aaacggccca ggcgggaaga ggcttttctt aatctgttgg 3240
gtttcgtgtt tatagtaaag cagctgccct tggacaagag tattcattta tcaggtcacc 3300
cacaaaggag gcttagttac tatgctcacc ctgtttgggt ttaagtaata actgtctaca 3360
gacaagtaaa aattggatca gggcaagttc agtaggtccc atcaggcctg cagaagctgt 3420
ctcaggctct gactgccaag ttcgtgtgcc tgttgtccag caggaatagg cagagagaaa 3480
gctgtggaaa ccctagccta gccccgaaga gctctatttt caccctttaa aaatgtgtgt 3540
tgtcttccac tcagtatttc tgtgaaacag cagcaaagaa tgattctagt gtgctcattt 3600
agtccctgaa cagttcatca gcatcccact tgtctctggg attcccaaga ccattcaggc 3660
ctagattccc cccacacctt ccttcccacg gcttggggtc tgcagaggaa agtgggcaga 3720
ggaaggggaa gagccagctc acattggtaa ggccttacca accaggaaaa ataaggatgg 3780
cagtgaccca gctaagcatc ctgagtacta cagaggaggc tttgtgaggg aggcctcact 3840
tccaacagag attctgtcac ctcctgagtc ctggactaag gtacccagag tcaccttctc 3900
actcccgcta gcttctgtgg gttcagtgac acagatcagg acccaggctg tacctggaag 3960
cgtcagtctc acgagaggtc ttatcttact cattctctgt tgtcttgagg taaaaacagc 4020
atgtgcagaa ctgtaaggtg ctgctggtct ttgtaaataa agaaataatc tctgatgaaa 4080
agtatttaaa gcatggaagt gcacacctat aatacccaca ctcgggaggc aaaaacagaa 4140
acattgccat aggcttgaag ctcacctgag ctatgtagtg tagcaagttc cagaagatct 4200
ggactgtatg gttaagactg tcaccaccat catcatcata atgaattgta tattattata 4260
ataatattaa aaagtattta gtggctgctt cctatgtcct agtcactgtt caagggactg 4320
ggaggtaagc tgtctgagct ccccaggtta gtgacattga gcagctgtga ctggcccaaa 4380
agaatgcagg gacaggaaga acaggaaaaa aatcacaagt agtcaggtag agccccaagc 4440
taggactgca gtaggcagag caggagtgag caagctcaca cgggcaccac taagagctga 4500
tccaaccatg gtttgtccgt gactgatggc tttggagcaa agcaaggata caagtagaag 4560
ccacactcca acctaagagt gtctggctcc aggatgccct tctcctgaac cttggacttc 4620
tggtgaaaac ttatggatgg tggatcccta atggtttccc aagtgcttgt ctttctagga 4680
agcttatttt aaactccacc cccatgcaag gtcaggctat ggcttactca gatacaatcg 4740
taaatgtcag caaagccatg gagaagatga agaagtaaga aggatcatct ccctttttacc 4800
ctccaaagac tgaagcctgt ggacagggcc ctgggcagtt cacccagggg cttgacaact 4860
tacacagctc tgactacgtt cctatgccag atgcagtctg tctgctcctc ccatctgttc 4920
tggtcttccc cagagcctca gaccagcaga cagaaatcaa gccatgcttg gttctagatc 4980
tgttgcaggt gcagtgtgca tggtgggaag gggaatgagg cagagcaagc agcttgagtc 5040
actcatgcca gggctccctc cactaatatc cctccctaga gatggactca ggttccttcc 5100
acagcctctg caggcctggt cttgtattgc ccagacagag atcacctact tcagaagggg 5160
cactcagtac ttgcagtgtc ctcttgattg gatggaacca aacaatgctg ggacacaggc 5220
catcccccag acccacagga gcagctccac catgcaaatc tacctccagc ttgaggtggg 5280
ctgcataggt aagctgatac acaaccctgc ttggtaaagg agaagacaaa gtaacattca 5340
atacaaaaaa aaaaaaaaaa aaaaaaaaaa agagtttgag ggtctagacc aactaaggct 5400
tggagttctt tagggagcag catttggatt tcatgtacca tcccagagca gggttctcca 5460
aagagaatag cttatacctc cttcccactt aacacagcca cccaaggcca gaaaacctag 5520
agaagccaaa gctgcaggac ttggtggtgc cccacccaga tctgggccct gccacattct 5580
ggctctagtc gtcttctata gcctctgaga ctcagtttcc cactgtgcac attaagacct 5640
acagtttttt tcctgggaaa ggactcattg ggctaaatga caaagcacac agagagcttg 5700
gctgcactct cttttcttcc caccattagt ggcctcacca ctccagggtg gccttggaaa 5760
atggggccca ccccgccccc ccagcagccc aagcaaagca cactttgaat aaagcagagc 5820
agcctgagct cccgggtgac ctggctcctc ctctcctctc tcctctagag ctatctcttg 5880
cagttgtatg tgtatgagag gatccgtgtg tttaaaacac ccttctccct agaacatctt 5940
catacccaaa ttctagcttt caaactaaag ttgatccctc ccaaagtgag aggtgacttt 6000
ggcttccctg agtttatcca agctctgttc ttggtatagg tcttcagggt cagcctcctc 6060
tacttgggtg taagagggag ccctggcctt ggctaggatc tgagcagggc cagaaagctg 6120
ttgcaggcag gcagcagctc ccagagggaa tgtgcttctg tgtgccttgg ccacacctcc 6180
tctaaccagt ggttccagtt tcagtggaac tagagaaagg ctctcatgtg tgtgtgtgtg 6240

tgtgtgtgta cacatcataa aagagccagc aaggcccaat tacccttcac tgcaatgcta 6300
cacagcacaa tgcctggttc tgcttagggg ccagagctgt tgcccacgtg caggcctgcc 6360
ccgtgcctct gtgtgcagag ctaagccttg ggaagagcaa ggcttcgtgg ctagctttat 6420
gctgacaaag ggctttcagt gctgtcaaat gactgcaagc agtcccttcc ccctccctac 6480
cacagccact gggcctccct ttggcagggc cagagggctg cacttgaacg cctagcctct 6540
ggagacttcc ttttgaacta gaaaaacatg gctcaaacat gcttcactgc agcagggctc 6600
tgcctgctga acctatagaa aggcctggag tagattcagt cccacagact agaaaacctg 6660
gctctggcct cacccacaag gcctgttatg tctggctcca gaggcctgct cctctggggt 6720
tttccatgcc tgtgaactag gccccattca tttccctgcg gtttcatggg aacgtccaaa 6780
atattgagca ggttgcaggg agcccaggag gaaaggggtc agtgaaaggc cctagctgtg 6840
acgtggggtg gccctgtggt caagccctgg tgggcgcctt gtcagtctgc tgctgcctct 6900
cctcccaggc acccttcca ctcccctgaa gcttggcctg cagcagcact ccccttcccc 6960
acccccaggc ctctactttc cagctcccta gccaccagcc ccaccctggc ctggcctcag 7020
agggaactgc aacaagatct ctacagttcc ccacccccag catccctcaa tttagtactg 7080
atcagaccac tgacttccca tcacgcccca ttcccttgca gttttccacc acactacact 7140
caatttgggg ctgctgagag agcagcaggt ctcctgtgag ggtggctgct gtcttcccac 7200
cttgggctgc ccagctatag aggagagtca tgctctagca cacaactcct gtgagagccc 7260
agcagctgcc ttcacagcta ctggggagcc caagggctcc ttaagccaac agtgaggatg 7320
tacccatgtg ggggaaattt ggtttgccga agaaatgaat ttgaaactag ctgggagcaa 7380
ttcttatcaa atttccatgt tagcagtttt caccaagaac taattgaaca atctctgtga 7440
gtggcctaat tccattagca tgagattccc acaaagttaa caagtgccct agtggccaag 7500
ggcagagagg ctcttctgtc tcacacttgg ttttggtctt tgaagatgga tggagtttca 7560
ggtttcagca acagccaggc agatgctcac ctctggccca gtaggcttca atctcagcag 7620
ctcagctcca gatcaacttc agaagccact ttgcaagtat tcagggtatg aaagggctga 7680
tcagaccact gacttcccat cccaagatga atttctcttc tgggttagca ggtaaaatgg 7740
atctgagggt agaacatcct acagacctca cctcccttgc caggcagtat tgagagacca 7800
ggtacagagg agtagaaaat atgaaggcaa agtctgagga gcatgagtct ggacagggcc 7860
tgccctcagc accacctccc cacctgaggc aagacccaaa gttagtgcca gcatctcact 7920
gttgtccaga aactgagttc taggggcaga aacagcagcc acctgggacc tgttcctgtc 7980
cttgagccac agcgaggtag ctgttcctag tgggtatagt actttctctt ctctccactg 8040
cccagtgggc ttgacagttc cagggacggt gctctggggt tacccatcag ccctgtggca 8100
tcatgctaga tgaggagccc agagaatgaa gcatctagct tctttgtccc tgactagcta 8160
tagactgagc aagggtcctc tcttcttgac agctgcagca tggtgtcagc attgactgct 8220
atgaaccagc cttcctatag gtagcatggt caggacagag gttgcagacc tacctacaag 8280
gcccttcctt aacctgctct acaatgagac ataagccagt gactcttccc ttcccctcct 8340
ctgggcctgc tggatggctt cctgcgggct ctctcagggc atgagccctt gcctcctaga 8400
ataccttcga cttgtctaaa actagtcata aggccctggc tccttccttc tgtcactgac 8460
tcaccaaaac tcaatggagc attgcctgca cttgacctat caccccttcc ctgtttttct 8520
aaaccagatt ccccagccct accaccctgg tggtttgcct caacttgcca gcctcagggg 8580
ccttttctta ccctttcctc tgcctctgca gcacttctca cagggcagcc tgctacagct 8640
cctccatgtc cctctgcctt attctaccac ctctaccttc tctgttctgg cctcctgggg 8700
gccagtgcac acgccttcgt cacctggctc gctcaagccc tcccttaatt gtctcatccc 8760
tcatccggtc ctactctgtc ccccagcccc aactattccc acatacttat ttgaaacatc 8820
tttcttgctc agtagccttc cagctcctga gtggggtcca agcctgtacc ctcaattcct 8880
tgcctttcca cctcgagctt tgtgtttcat ttctggttcc ttgacatccc ttgaaatgaa 8940
tcctgcttgt gagtgtacct ccctgtggat ggatatacct gtgggcgtct taggaagtat 9000
ttaggcattc tgattgcctc tgaggccact ggccccaaga gcacagactg atgcgtaggg 9060
atataggact tggagcagat cacttcccta tttgcacatt aagctcctgc cacccagaaa 9120
gataagaaca ttgtagggcc ataggagaag tgatacccag ggtggagtga ggccacagct 9180
agaaaagatg agtaagaaat ccaacaaagg gattcaaagc tagctctgaa agctgaggcc 9240
taccagccat tgctagtgta aataactctg ctgctgtgta tgaaggaagt agtactcagt 9300
agataaggaa gtagtactca ggagataagg aagtagtact cagtagattg gttagggcct 9360
gtagagaaaa gatcaggaga cttggtgacc ccaaattatc agcatgcctg gcagtgagta 9420
ttaggaagtt agaaacacct gagaactaaa cagaaaggac aatagtgata gagggaccca 9480
acagtcctac ctcctgaact ggagcctgat gccattgctc ccaggagtcc ttcactctgt 9540
gcaggttgtt gaacatccac tctgggacta gcacatatac cactagggat ggagacgaga 9600
tacaacctag gaccgagaga ggccatcaca gtcatgaagg ccagatgcta tgatggggac 9660
caagaggatg ctaagagaga gttcctcatg ctatcttcca aactgagtga tagccaaaga 9720
aaggacatga gcgaggagca gccctagtac tctgggctgt gagaacagta tatgaaagga 9780
cagaagccaa aagggcctca ggacttcagt agagccaaag taggatggag cagggaagaa 9840
gagtgatgca gtccaaacat acataaaaca taccatattg tttagccagg tagaggaact 9900
gctagtctta aacagtggtt cctgctggaa gggacatgac cctgttttgt gtgaaggcaa 9960
cacagtagca ggagatgacg acctggacaa cagtgatgac aggaaggaaa gcaagagatg 10020

cttctggaaa tctactccag atcctagaac tggaccattt gagcaactct tgcataccct 10080
gttgctcttt aaaaagagga agaaagaaaa gaaaaaagga aaggaaagga aaggaaagga 10140
aaggaaagga aaggaaagga aaggaaagga aaggaaagga aaggaaagga aaggaaagga 10200
aaggaagaaa ggaagaaagg aagaaaggaa gaaatggaaa gggaaggagg ggaggggaag 10260
ggaggggagg ggaggggaag ggaagggaag agaagagaag agaaaaggag aagaagagaa 10320
agagaagaag aggagagaag aggagaggaa aggaaagaaa aaaagcaata acaggacagg 10380
tgcccagaca agaggaggtc tagctaggct agggtagaca cactgtagtc tgagtggtac 10440
ttatttatgg ccaggaactt ggtcgctgat tttcacttgg ttggcatgcc tgccttcctc 10500
agaggcttct cacctaacca ctgtctgacc tgtcaggatg ctgaggttat gtagactgaa 10560
agaccctaca tagagaaaga cacaatctca aaaaattagg taaatagcaa ataataacca 10620
catttggaca caagtaaata aacatggccc agtctgggtc ctcggatggt aggtgcagtg 10680
tccagcagca taagttgtgt tgagcatact cacttcctaa ggtaaagaat gcctataata 10740
gtaataaatt gacagcagtg taaatttgta tctgaacctt tccctttaag tggtatcagt 10800
accgttctgg gcggaagctt cctttcttat gacatggaat gtgcatctct ggtgtgcact 10860
tatatatagg ttgattatgg cttgccagga catgaaaccc tggctcagct ggtccctggg 10920
atgagaaaca gcaaaccttc cccctctttc cccaggcctt gcaggcccag acagcaggta 10980
gggactgctt gagagagggc tgcagagctt tcaccgtgat gtcctggctg acagcctcct 11040
gtcacagaag agtcctaccc aagacctcca gagttgtggg gccccagtgg ctcaggcctc 11100
cagatgctca gcagatgcca gacctgggac tgaggcccca tctctgaggg cttggcttgc 11160
tgttctggaa ggtgatcctg gctgtcagcc attcttgagc ccctatttag agcagttgtc 11220
aggcagttgc tgggattcag ctagctcccc atccccagca gggctgagtg atctcatgcc 11280
tatgcgatgc tgtcgcctgg ggaggaggtg ccctaagact gaaggcaggt gcccagacca 11340
gaaggagagt ctaggccatg gcaacccaga caaccctcag ccactttccc agttccatac 11400
cctaatgtgc tccagcctgg ttcatttgcc ctgggatagc acaaggcatc atttgagttt 11460
ggctgcaaac tttatgtgaa gtttgccccc ttccccacaa gagaggaaag ctcagattga 11520
taagctcgct tgccagagac cccacagcca accggtttgc acagaaccct cagcccaaaa 11580
ggcagcttta gctaacgaaa cagcaactgg cactccaggg acccctggac tttgggccac 11640
aatttgtaaa ctctcgagct attcttccca gaaagttctt gggttctaag tggcttttgc 11700
cacgtcccag gactggaaca gaagagtctg gtggcccccc gctgatcact gtgagaactg 11760
cacaagggta gacaggtgcc agcaagaggg gccttggcta gccccaggtg agaggagaga 11820
tctgtgcacc cctccatggg tgattggccc cacagggaat cttaagttca gtggagctct 11880
ggctgctgct ggtttggcca tgtctcagcc tgtcagttct agatcttcta gatcctgggc 11940
ctcctgggag tctgggagct cctgggccag agtatcgctg ggtcctttgt gatgtgcaca 12000
tgcttgctcc ttccccttcc acttgcagga tgagaggatt ttaagatcat ttcctcaaac 12060
caccctagga cactaacgag ccttatccgc acccagaagt gggaactttg ttccgtgcat 12120
cctcttggtt ggtgacagga tttaagttaa tgctttgctc ttgacagact gttgtgaaga 12180
attcctaggc tgatgtctta actcagaggg agagaggaag cgaagggcag atggacaggg 12240
ggtgcagaat ggacagatgg acaagggcta ctaatggaaa taggaatcac aggcaccaag 12300
gtgcctgaac aaggccagcc tatgcaacca gagtcatgcc agattgtgat cagagttaga 12360
catgctcttc ttttctcaag gtcttgggca gcttacaggg ctgtgcagat gtccatggag 12420
gataaattgt caggtcatgg tcactggaga agctgcttgc ctggagtctt ctcatgcctg 12480
tttcccatag tggcccctcc ttcaccccat ctctcttctc ccaccatgaa ctcatgtgga 12540
acaaagcaga agagttcctg tggaccagga ctctggatca tcccatcaaa gtctctgact 12600
tatagcttgg agcatggaga agggtccctg tcctgagcca ttagcccacc ctgctcctgc 12660
ctgcctaaca gccttatcct cacagtcctg ctgtggggcc ctactgccac ctgccggctt 12720
catttacaaa ctgcagtcct agttcagcct tgggattaca agagactgtg tactctggtc 12780
aacaggattc tgagactgca caaagagaac aggtctggaa acagtcctga cttcccatag 12840
cagtgtcaga gcatttattt aacagtctga gcagggacag acagcatccc agcactgtgg 12900
aggttgtgac aaggtgaagg attatcagat gtgttagtca tttgtgtggt gtatgtgaag 12960
aaaggaaagc accactgtgt cttggacagt tgatattcct gcttggtatc tggcccagaa 13020
cacatgttcc ctctgccttt gcaccagccc tgtgatcaga cattagcatt gtcttacttt 13080
gggaaggaag aacaggagat tcaccagggg ttccacaaca agagtgtggt agaaccagca 13140
ttcaaactgt ctcagaggct tggtggtcag tgatggtgat tgtcagtact gataagcaca 13200
agaagggatt ggggactgag ataagggtgt cagcctaaaa agctctgcct acaaactagt 13260
gggtaacaca aaggcttttc ttcttgagct gagtctagtg agtccatgac agaagccaag 13320
tgtgcagagg cccccatgac tggagctagg cttgcccagg ccccaatgac aggatcgggt 13380
gtgcacaggt ccccatgaca ggagccaggt gtgtccagac cccacctagt gggcttcatg 13440
agccccttgt agagaaagct ctgcaaatag gcacctagac agagcagagg caagcgtctt 13500
cacagcaggt ccagtctgga gaaggaacat tctcctatat gtctgatttt ccttctaaga 13560
acttgtctag atgacagatc tgaccaagca acactactca gcctccagta gagggattta 13620
tcccaggttt cctcagacac tggcagactc tcagagctgc ctcagtggga gaagaagact 13680
aaggctcaac atgcagcttg gggtgtctcc tcgaagctga acaaggtctc taatggcttt 13740
tgccttccca gggagcaagc tttttccaca caggacatgc tgactatagt agtatcagga 13800

tgtacacacc tgaaagactt catgttcaat ccacttattc accaagggag ccccaagggt 13860
caggggagaa cctgcctgcc caggattgaa atacaggtaa ctaacttcag ggctggttga 13920
ctctgtctcc tgctgtgcct ggcttcctac ccttgacaca cttcctccat cttccatcag 13980
tccccacctc ttctcactag ggccttgaca tattttcatc ttcctattta gagctttatc 14040
cccatgtact tagttactta tagtaattct aattacactg aagtgaagga aaatagaatg 14100
atagctcttc ttacaagtga gccccagagg aagcccagca ggtcttctta ccagagatca 14160
ttactgtgta tcatctctgg accaggcatg acctgagagc atccccattt agtgagaaat 14220
gagacaggag accacataca cattcagacc aaaagagaaa gtcattattg acaggttgac 14280
tctaggaaat ctgagcatgg agatgaaaga gaaagagcag aagaactagt ttgatcaggt 14340
cacagaaagg ttcttacact gagaactaag gtattagaga atcagctgag ccaaggcctt 14400
gggacagggg cagtagcacc tgtctccagg atccctctag ttactgtcta tcctccacag 14460
gcttgtagag gagttcatgc tcctggccaa catggcggtg gcccacaaga tcttccgcac 14520
cttccctgag caggccctgc tgcgccggca tcccccacca cagacgaaga tgctcagtga 14580
cctggtggag ttctgtgacc agatggggct gcccatggat gtcagctctg caggggccct 14640
aaatgtgagt gctagtgggc aggtaatggg aagacctgct tggagaaaag agattaaagc 14700
ctagaagttg ggctggtggt gacttgtctg cctccatgta gccactccct atgtagccag 14760
gtcagtctcc cctgcggtgg agaagatggc atccactagg ggtaggctct attatcaggt 14820
ctgtaccaag ggagactatt caaggtgtag ccacttgcat ggcctctagc aaggactgga 14880
ctggtccttg ctgagccagg gtaacaggaa gcaaggaatc tttcttagag ggaagcactt 14940
cacatgttcc cttctcagag gtaagcttta tgaggctgca gaaccagtgt ccttgctcat 15000
cccaccaaaa ggagatctcc cacccatgtt ccaagatgga ggtgggtgtg aagtaggcaa 15060
aggattcctc taataaagag agctggccta ttgtaagcat ggaagatctt aggcccattg 15120
tatgacacag actatggatc acagctctta caccctgcag gtagtcaaca tggcccatag 15180
cctgggaacc cctctctacc ttccccaaaa tgggatcaag cctgtttcca aggccaacca 15240
tatctcatac aggtttctgg ggtttacttc tagaaaagcc tgactaagac atttggagat 15300
gacaagtact ctctggcccg gaaggaggtg ctcaccaaca tgtactcccg gcccatgcag 15360
gtaaggaggg gccacaccag cccctgatcc cagtagtacc catagctctg gctggcaagc 15420
accacgtgta catagcccac tactgtcttg ctctgctctg ggatctactg gatagagagg 15480
cgctgaggaa cactatctgg caagaaaagc tgcagtcaca cctgggacag gcgcactgag 15540
ctccagaaga aatctatcct ctgtgctgaa aagcaggctc catccctcag gagctgtatg 15600
gcctgtggct gctagagacc ccaggcaaga gaaaaggtct ccatctctac tgtagctgca 15660
gtctgcagga gaatcagtct gcttcgagct tgggcccatg ttcccaagca agtgacagct 15720
aggagataga tgggctggct cctagcaggc tgtcacagcc ctccagccta cactgcagtc 15780
tctgcagggc ctaagcatcc ttgggatggg agccatctca gtagattggc aggtcaattg 15840
gagctacagg tactaatggg gtcagctgtg ggccccagca cttgccaggg cagtggcagg 15900
ccatttttca agggtcactc tcaacagatt caatctgttc atgagagtca ggtagcctca 15960
gccagccaca gctgatttat ttcctgataa ctcctggctc tactaggaat ggagccatca 16020
gggccgttcg gggacttggc tgcctgttcc ccaccctacc acctacccta gacagtgcac 16080
acaagaccct aggctgtgcc ctgtggagtg ctgctcccac caggattctg atggcaagga 16140
ctaagtggca agtgacaggg acaggtcagg gcacagcaac agcagcacaa cagtggggag 16200
tgaggcctgg ttcccaagag agctgctgaa acaggacaca agctgtccca gtggtctctg 16260
gccactacag agaagccatg attgttgccc tgcccagaga tagctacact gaccaaggag 16320
gagccttgac ctcttttcct cctcacgctg cctttctgag gaactgagcc accactgaaa 16380
acaaagataa acatgactta ctatgaagac tatgccctct gtccccagca acttgcccca 16440
gatgtagctc aagatccagc agggggctgt gctctgagtt ctagggctat gtacatggag 16500
taaccagaaa aggatgtcat ttggccaggg attctggagc tttcaaagaa gtgaacatcc 16560
ttctaggcaa cagctgctga ttccaaggct gtgatggctg aagccagacc tcatctaggt 16620
tgttcctagg ttgcagcggc tcagtggttc ctttggctca ggtctcttag acctgtggat 16680
caccgtggac agttgttcag gagcaaactg atgcaggctg gcaagctaac aaactaccct 16740
cttgactggc atatgctaga gtattgtact gtacttgtac ttgtggctag tgtgaccatc 16800
aactgggaag agatcagagc cagaggaaat atggttggct cagccagaag ctgaggaacc 16860
ttacgggctg ctctcccttg gaggttggca tcttgggctg gccagggaca tgcggcatcc 16920
tcagtttctg cttgtgtctc cagaagacaa ttcacagccc tgggccaaca tggccatatg 16980
ttttcctatc tgcaatcatc ttgacccagg gtgactgctc ggatcctaag gaaaattatt 17040
ccacagcaac tcctctgcat cattcctggt agggactcag caaccatagg ccttaaggag 17100
gaagagccct tgcacagctg ccctggtggc tagtcccaca gtgctagagg ccacccagca 17160
tcctgagggc ttccagcctc ccatgcccaa cagaggcata gcttcctgag ctgttgcgag 17220
cattgccctc atgaatggag cccggcagcc ctaggcatga ctagcatgca tcctgagcag 17280
ggaagggctc tggtcattac atgctgtcca tggcagctgc tgagaacccc ttaagtagga 17340
tgaccctggc cccaagaatc tggggctttg atcagctgcc tgaagctgat aggggaggtg 17400
tgtatcaacc ttgccatggg ccaggcttgg gtctcagcac ctagccgacc cagccaggct 17460
tagtcccact ctccctccag atggcactgt acttctgctc tgggatgctg caggaccagg 17520
agcagttccg gcattatgct ctcaacgttc ccctctacac acacttcacc tctcccatcc 17580

gccgctttgc tgacgtcata gtgcaccgcc tcctggctgc tgctctgggt aagggacatg 17640
actctggcct gggaagacct ttgctggtcg agagttaccc actctcagag taagtgacca 17700
cattactgtt atcatggaca tgccgaggga cagagaagcc taagtctgaa cactgtcgat 17760
ccacacccag atgatggaag ctttagtgag acttattgca agcgcgggac catatatggt 17820
cccagagcct tgcctcagca cacaaccgtc cttatcccca tactagcaac cctggtcgcc 17880
ctctcctcca ggctacagtg aacagccaga tgtggagcct gataccctac agaagcaagc 17940
tgaccactgc aatgaccgtc gcatggcttc caaacgtgtg caggagctca gcatcggcct 18000
cttcttcgca gttctagtaa aggtgagtgt ccagcctggc cccttcttct tccccctttcc 18060
ctgtcctccg atgaatggag caccagtgca ggtcctccct gggaggatgc cacgatgcat 18120
tgttcctaca ggagagtggc cccctggagt ccgaagccat ggtgatgggt gtcctgaacc 18180
aagctttcga cgtgctggtg ctgcgctttg gggtgcagaa gcgcatctac tgcaatgtga 18240
gtatccctgg tatgaatggg aggcctgcac ctacaggcaa aaccaaaccc attttcccgc 18300
ctgtgtctag ttccttgttg gggaaatatt cccctggtcc agaatatccc atgatagttt 18360
cacaggtgta aatggtggga ttcaactgag ctcccttctg tccctggcca ttagctatgc 18420
agggcccaca gactgcatcc tatagcagtg agtttcactg gcatgtggca agaaagggtc 18480
cagacccctg aacccaagta ggcctgccca ggacagggcc tcaggccaag ggtcaagtct 18540
gaactcttcc ttaaaagccc aggcactcag aacataacca ggatggcagg gtgtgggacc 18600
tgtgatgttc ttatagaaac atgcagaagg ggaggccaga gggtagccag cactgctctg 18660
gacactgtgt ccccaaacag aaacaagagg cccatcctgc cttggcttct tccctggatg 18720
acagtttatt caaagtcctc ttggtgcctt ctgtaatgtc acttgggggg ctttgcttta 18780
gctgctctgt ggtcaccaag tcaccacctg gctcctaccc ctggctttga acttcttaca 18840
tacacttggg gaagtgtgga accctgcact ggaagagaca caggattcat gaaagaggca 18900
gaacaggaaa gggccaagtg cagctggaac taccagacac ctgtagttac ctggctctca 18960
gcctggtggt caggtctatc accaacagcc taggcagatc tcttctcttt gctacagtca 19020
ccaccctccc acattgtccc ttggaattgg gtcaccttca ggttctactt tgaccaaagg 19080
tgacttagca gaacctccta aatctggctg aggtggacca aggatagggg gctgggggat 19140
gtctctgtcc aagcaggcag ctacagtaag gcagccggta caaagctccc tccagccagt 19200
cagaaatagg caggcagggc agaagaggtg tctgaagccc atagcctgag gctccggtgt 19260
gtccccctgc ccccaggcac tggccctgcg atcctacagc ttccagaagg tggggaagaa 19320
gccagagctc actcttgttt gggagcctga tgaccttgaa gaggagccaa cacagcaggt 19380
cagtcccctg ctgtgtccct aagcctacct ctgtctcaaa cgtgtgcccc taggtcctca 19440
tctgccctca tttctcccca gcaccatagg ttcccctgtg ggattccacc aagccctggc 19500
ttagactgcc aggttctata tgggaacacc cactatggca gtggttctca accttcctga 19560
tgcagcgacc cttaacacag ttcctcatgc tgtggtgaca cccttccccc agccattaaa 19620
ttattttcgt tgctacttca taactataag tttgctgctg ttataaatca aatgtaaata 19680
tttttggaga tagaggcaaa gggtctcgaa cgacaggttg gggactgctg ctctataggt 19740
agataggtgc tattcctctc ccctgaacag aacttttcag aaattttgag aagctgataa 19800
aagcttcttt tatccctctt gttccaaagg ctggcccagc ccagctcggc ccggcccagc 19860
ctgttttctt gctcctcgtg aatggtcact gaataacaaa tgtctacata gtgccattta 19920
gcctactggt tttccccaga cccaatgaat cccatttaca gataggcgat agaggctcgg 19980
gaagttaagt gagcctcagt ggtcagttgg ctttgattgc aggccctcac ctgccctgtc 20040
ctctcctgtt cctggctctg ctacaggtca tcaccatctt cagcctggtg gatgtggtcc 20100
tgcaggcaga ggccacagcc ctcaagtaca gtgctatcct gaagcgacca ggcctggaga 20160
aggcgtctga tgaggagcct gaggactgaa tgctagccca agccaggcct gtgcctgccc 20220
taccctgctg gcttttagga ataggacctt ttgacaccaa aggggatttt taatttggtt 20280
tttaacaact caggggtttg tttttatttt tatttttcct tttattttac ttttgcagct 20340
cagttttaa atgaactgga aggttagggg tcagggcagg ggatgctgag gcctggcctg 20400
tgcttccctg agcagagagg atcccagtcc tcctgggcag gcagccccgc ttctaccagg 20460
cgacccactg cccttccctg cccaggaaat ggggggtttc agcaaatcag tgtcatggaa 20520
taaaatcaag tgtgaattgc tgtctgtgta gatgccatgg gcaagcatgg cagctgggtg 20580
gcctgtcacc gagggcaagg ggctccctag aatccacctc acagctgagc tggggtcatc 20640
agctcaggac cttcctgcca gctccagggt gattcacgag ccatgtgtgg cagattgatg 20700
ctgcagcctc cttctagctg attaaaaatg taattagtat gcacagtagg gagctgccag 20760
tcaccctgtg catgtggctg tggccctccc tccccgccct tcctctctgt tgccagccca 20820
tgggatgtgg ggaggtggga ctaccacctc tcttcttata tatcataggc caaagctccc 20880
aggagccctg ttcacagcta tgctatgagt aggtacctca atacctgcag tttcaaacat 20940
gtaccctaaa aggtaaaggc agaccttcca gagggcagga ggacttcaaa acagatccta 21000
cctgacccag ccacctgctt agcatcccaa gtactagcaa ttcctaccct tctgagcact 21060
gggcagcctc ttccctaggg aactgggcac agtgtatcct cctttcacca gactggaata 21120
gtatgaattg gcttcaaaag caactagaat ctaggatgaa aaccaaagca accaaggccc 21180
tgttccccag tgctgttccc tgtggcatca ggattaacag acccatctga tatggttatg 21240
gtgattttct tcaaaaaaga ttctgtggag tcccctggca ggttccttgc agtgagtgac 21300
tggcacagct gcaaggatat cacagcccta ggatgggctg ttgtctgagg agagccacag 21360

acacgcccca cctgccctgg gctccttgtc agcctcacac agccttcagc tgcctgtcct 21420
cccacccctt aggtctccct tctgctccca ttcccagacc agcatatctg gataggcaga 21480
gcagtgatgg atggtggttt agtatctggg taaagaagac tctggtgctt tgccaatcct 21540
ggatctctag actaaaggct catcccacaa atctgaggag gagctagctt ctctgctggg 21600
ccaaacccgg gcttccaaga cctcctttca ctgcctcctt cagaatcctt aaggaagctg 21660
tggctcgagt actgggttct ctcaagacac agaggtggct gagacacggc ctccccaacc 21720
ctcgtgagga acagcttacc agtcagtaag gaaagttttt gcagagtgaa cgtgcttagg 21780
aggcaggcac tggactagaa acttctataa caggcttgct ccaccctcag gttggacatc 21840
atgttactga gaactctgag ccatagcagt cctgggttgc cctaacctgt ctgacaaatg 21900
gaagtctcag gtctccatct gaggtggtgc agccaggccg ccctggccag gacttgagcc 21960
acctgtcctc tgttgcctcc cagtggctct gtcatcttcc cacagcacca gctgagtcac 22020
ttctctttgt gtttgttcac ccagcactga gtcagagaac tgatagaacg tgtgtccaca 22080
caccactcag tgtggcagtt ggcaccgaac actaagggca ctgctggcag aagagatgac 22140
aagaaataaa cgaagtactc actcatcagc tatccaagac acctgcctgc actataggct 22200
aaagcacagg gcacagagca gctcactggc ttttcctcag tggcctgtca ggttcacatg 22260
gaaggaagac agacacaatc tcactctgat tggggtctca aaaagctcag aagcaggcag 22320
tatgttccca ggggaaaatg gagcaggttg tgggtccagc atggatgaga aagttaagta 22380
ttaattaatg gttgtaacct gccctcctgg ggagagaggc tgacaccctg cacagtccta 22440
cttagcaaag agccttggaa aggacttcag tgggcccagg atggcagtcc accggaagct 22500
ggagcacagc acactggagg tatggtaaga gggagctggt gccaggcaga ggcatcccag 22560
atgcataccg caacagccag tgaggatacc cactgcacca ccatgccagc tagccactaa 22620
agcagccagt gagggcagtc caggtgagag gaggaaggcc tgagaggaga aaaaaaatat 22680
ccaaaatcct ggggtgggtg gtgtcccaaa actgaggcag cataggcaca gtgggagcag 22740
cagagacctg cagtggctcc tgctgggaat ggggcaggcc tgtgaaggag agagggctga 22800
gccatagggc actggtgact cagtgagatg gaaagaggga ccaagtgtag aacagctgga 22860
ccatgagaag agagcatgca gggcagttca agaaccttag aagaggccat gtgggcagag 22920
tggggctcca gaagagggta ttgcagtcaa tgggagctag gagcctggag ccagatctcc 22980
ctctgtgaag gttattgatt atcagtttct gaaggataca aaacatccac tctcactacc 23040
tccccaagac cagcaaaggc accaatgagc ttgtgttcag ggatccattg tgaggggaaa 23100
tgggaaaata aaggaggacg ttaccctggt agctgagagt gagccagcag tccctgttag 23160
actggagaaa ggcaggtacg aggccatcca caaagaatgc tgaagcaccg agctgcagta 23220
ctgcacagca tccaacaagg ctgggctgct ctgggctggg ggtggagaag gatggctaca 23280
gaagtcagtg ttgccactgt agtaaataaa ctgacctctt cccacaccag caggcaagag 23340
agcgatcatc ggagagtcac caggcctggt agaatctcct gtgataggac cccatgagat 23400
gcagcagagg gctgctgcag gatccagtca gccctcaggc cttcagcagc caggcaggag 23460
attgaaaaca tcttctccgg ggccctcctg tccccacatg aaatacaaac ttggcagcag 23520
agtttcccca gtgagatccc agccaggctt ctcatgggga atcagcctgc caagtcccta 23580
gggtacttgg gcttctagtc actttgtgag tcctatctgt aaataaagat aaccagggaa 23640
acttccttttt aaaaggaaaa taggtcctat ggagaaaaca gatcacacag agaaaatgaa 23700
gttatcactg acattttcaa ggaaatgaga gccatggaaa aacaaggact agatggctag 23760
acaccaaaga aagggctggt gatgtagccc agccagtaaa ggtaccaggt gctaaacctg 23820
ccaacacggg ttcagtccca gggctcatag caagagcagc caactgtggt tgctatgtaa 23880
tgtccataag gcgtctttgg agtgttcaaa gtatctaagc tcccatgaag gccatccagc 23940
tggctgcttg gctaatatcc ttaaacatcc aaggttccag agaaggatat agttacagtt 24000
aaatcccccct ggctcacaac atcttaactt atttgaaaaa aaaaatatct gagcatggca 24060
gctcacacct gaaatctcag catttgggag cctgaggcag gagggttgcc atgcattgga 24120
ggccaatctg ggttacacag taaatactaa tcagactacg tacaagacta tgtagatata 24180
ctatgtagca agactgtcag aaaggaaaaa taaacattaa agaggtaatt agagtaaacg 24240
cccaccatta actgtaatgg tatttaatag tgttcaaccc tcaaccaaat gtccctggga 24300
ggagttggat tattttatgt ctcatacacc taaacagtag catcagtgcg ctcaggattg 24360
aggagcaggc cagcaccacc aggggtgaga ggcatccgat ctagaagatc cctgcctgag 24420
gtagccggta agtgaagtgg ctcagagaaa gtcaagtcac ggacagactc caagattaga 24480
ctgacactaa gtgcactgaa aacaacccta tctgacagta aggaacgtat tgggtatgag 24540
tggggaagca agtacaagaa agaaaagcct ttccctggtc tttcacctgg cacatctggc 24600
aacagcagta catcctaaga taaacactga gtgagaatct acaaactgct ctggggccat 24660
attgagagga tgaggagatg ggacacatga gtagccagtt cactcttcag tggaaggttc 24720
tggggagcta aaggtggctg cagattcatt gcctacccac caccaccaca caccctgttc 24780
ttgtccttcc tcttgaatca gagcagagtc ttcagctgct gagctcagat acagcggaag 24840
tgatgttgca ctgtctccgg ccatgctgag agtgccacag cagagctgtg agaaagtttg 24900
ggctccctcg tactccagct cagaggcatc ttagagatgc atgcccaacc cccacagaac 24960
cacccagtgg tggccttgtg gaggaaacac aaagtctcca gaagacccct tccaaattac 25020
acatttctat cagctttaaa aaaaaatgtt ggttgttcag ggatagttca tgacataata 25080
ttagcagaaa atgtcagtaa atacagctga aaactggaaa tgaagggctg gagagatggc 25140

```
tcagcagtta agagcactga ctgcacttct gaaggtcctg agttcaaatc tcagcaacca 25200
catggtggct tcacaaccat ctgtaatgag atctgatgcc ctcttctggt gtgtctgaag 25260
acagctagtg ttcttacata taataataaa taaatctttg ggccagagtg agtggggcca 25320
gagcaagtgg ggctggagtg agcagaggtc ctgagttcaa ttcccatcaa ccacatgatg 25380
gcccacacca tctgttcagc tacagtctac tcatatacat aaaataaatc ttaataaaaa 25440
actgaaaaag aagaaatggt tgttttcatt tgtctgttat tctgagaggt gtggttttta 25500
caaatagtgg taactataaa aaatttaaaa cccatgcaga ttgggggtgg actagggaaa 25560
tggctcagta aatcaagtgc tttccacaca caggagatgc actggagctc tgatcctctg 25620
aactcctaca caagcaggcg gccctggcag ctgcctgaca tccccgcact cagaggccct 25680
ggtgaactga ctagctagac tagcgggacc cgtgagctct gggctcagac agagatcctg 25740
actatagaaa gtagaaatca accagggaag gggtctgcct tcaactttgg gatgccacat 25800
tcaaccacat gctcatgcac acacacgcac gcacgcgcgc gcgcgcacgc gcacacacac 25860
acacacacac acacacacta aataccaaga ggggacgtgg ttgcctccaa gatggaaaat 25920
gcatctagga gcatgaagtg ctctcccatt ttgttttaat aaacctgcca gatccatttg 25980
acactttaca tctgtgtata atttcaattt aaaaaactaa aagtaggggg gaaggctgtt 26040
tatatttagc cagaatggat ccacaattgg tctaaaagct ttcctgtaca ttcagcaagg 26100
agtgtattaa acaatccatt attctagtaa ctaagataaa atccctgctg acaggcaccc 26160
tggtattccc agaccattaa aatgcttcca taaagtctgc ttaaagacac aggtagcagg 26220
ccaggtggtg acacatcctg gctgcctcag cagaccttgc aggtctaggt gtggagccca 26280
gagtgtgggg cagccctggg gcaacacagg cagacctctg gaggcctgcg gaggtggcat 26340
ggcagacgac actgtaggca gcttgcagaa gagctggcca ggggccttaa aggacatcag 26400
ctaaaggcct ctgtggaccg aaagcacagg cttgagggat tatttggagt cggggttggg 26460
atgaaaggaa ttgacacaga ttaaagaatc aactccactc tggtgggtgc cagaacaaag 26520
gtgatgcttt gtataacgat gaagaaagtt ctagaactag ggggcagctc catgatagaa 26580
cacctgctta gcaggtaaaa agagtcaggt tcagtctttg gcacaacccc cttaagaagg 26640
aaggttctag agaaaggggt gttctggacc tgagaaaatt agcttgaatt tgcatataag 26700
taaattatgt ttataagttg aaactcttac cgtggccctg gagagtggct cactcagtta 26760
gttagctgct cttccagaag actcaggttt gagtccagtg actcacagct atccataact 26820
ccagtcccac agagatctga taacctctgg cctcctcagg cacgcaccag gcacacatgt 26880
gatacacaga catacataca ggcataccat gaaaataaat tttaaagaat taactgtaac 26940
caggtctgtt agcacatccc tgtaatccca gctgctcaaa gggctgaggc agtaggagag 27000
caagttcaag tctggctttg gctacagagc ctgtgagtta aagcccaggc aacttagcaa 27060
gacccagtct caaaacagaa attataggca ggaggtacct ggagccatag ctgaggatgg 27120
gtactggcca ggcctgtgtg agttccccaa gttctattct cattcctgaa aaaaaaaaaa 27180
caacaaaaaa aaaaacataa gtggtcagtt aaaccttagg ataagataat ctctttgaac 27240
ctgctctgcc tttttgtgag cttttatgat tatcaagggt ttctttctct agtatataaa 27300
gccatcttag ggggtaagat ctatttaagt catttatttt acttaaaacg gtcattttac 27360
tcaagcaggt tcatgaactt cactgtgttc cacagtgttc ctaaattgta cagttctgga 27420
aagcagttag ccaaatacca agaaaatgaa tgcagaatag agtgaggaac aaaggcggcc 27480
cttcagcata ttttacctta atagattttc cagctaataa gactgctgct ggagggagag 27540
tgtcctcccg gtgctcctga caccaagtca cagaagaaat taccgaatgc ggcactggac 27600
acctaggact ttgcattcct ccatgcccag agaagcaggt atcactcaga aggatgacag 27660
gggctgggga ggtgactcag cagataaggc acttccacaa aagcctgatg acctgagttc 27720
aatccccatc acccactttt ttttttaaaa gagaggaagg agagaactga ctgcagttgc 27780
cctctgactt ccatgtgctc cccaaggcga gcaacacacc acatcataca catcacaata 27840
atacattttt aaaggatgac tttgagctac acctgccaac tgtccctgat gctgccacca 27900
ctacaactag acagaggagg tcttgcctgg tgggtaagtg aacagtcaag ggtgcccacg 27960
gagagccact tctgccaggc ccactcctga actcctaggt cctcacgggc tcagaccctc 28020
ttgcctccgc tgaagctgca gaagggactc agctgtgcac tgtctcctcc cccagggacc 28080
atggggcgtg gtgagggaaa ggggactgtc tcttgccttg gtggtagatc agtctccttc 28140
ctgttctcac accagagccc agggattgac tcaggtgatg agagagtgga gaaaggatct 28200
acacccagcc cccctctaag accccatagc agccccagga cataagtaca gaagagctgg 28260
gctgggctat gcatttgctt tatacatttg agtcaggaag gtgggcttat ggtacacagc 28320
tgagcaagga ggcagattta gctcatcttt ataagaggtc tctgtagggg agcagtctta 28380
ggctgcagtt atcccagagg aggaagctga tagcttctac atggactgtt aaaatttgca 28440
ttcagaccag ggaaaggctt tgccacccct ctgagcttca ctggggaagg cttcgccact 28500
ccatgggcct gatgcgttgg aatccatgac agctcagccc atgtcaacaa cacacattca 28560
cttagggttt catctgctcc tttcatgtaa cacaaggctg cttctgctac gtgtggggat 28620
ttggagagta tatttcttgc tggaaatgaa tgatcaaagc aaggccccac ctcctaggct 28680
ctatcaggat agaagggtca ctaccagaat gagccacctc ctcactgacg gttggctcca 28740
cttgcaggcc ttccaggatt ccaagacttg gttctttgtt ctgaagctca gggtatagct 28800
tcctctacct ccacacacag cccctaaccc ttcagtgcat agtgaaccac taagatctcc 28860
cactatgtcc ccatagcagc cctggagtac aggtcctgtc tcttgcccat tctcaggtga 28920
```

gagaacctag gctcagagag atgacacttc agaagataat cagaaaatgg tggaggtgat 28980
tgggagctca gatccaaaat gcactgcatt tctttattag atatttttaa ttctaacggt 29040
gtacctgggt gtttgggctg catgtgtgtc tgtgcatatc accgctgtgc ctgctgccca 29100
cagaagccag aagagggtgt tggatttctt tctttcaatt agtacttctc aaaattcaac 29160
tattcatgca tcactttaat gatttttttt tttttgccat agccacataa tggcctgtgg 29220
tcatatttat ttaatgtttt tcattaaaca agcttaggcc tttccttgaa ataattagaa 29280
aggaaaactt acagttacca aaaaatagag ggccagctgg gggtttagca agagttggta 29340
cagtgttcac ctcgtatgca caaagccctg gcttccaccc ccagtaccca gagcttggga 29400
gaggaaaggc aggatcaaga gttcaaggac atggccaggc atggtggggc atgcctttaa 29460
tcccagaggc agacagatct atgtgagttt gcattcatcc tggtctgcaa agtgagtctt 29520
ggacagccag ggctctgtta catagagaaa ccctgtatcg aaaaataaaa aaacaaacaa 29580
acaacaacag caaaagagct taaggtcatc tctggctgta tagcaagttt gagcccggct 29640
gggctataca agaccatctt aagagggagg aggaagggga agaaaaagag gaaacaagaa 29700
aggagataaa agaaggtggg gggagtaacc agaacgcatt atataaatgc atgaaattgt 29760
caaagaacta agttaattaa aaagcaggaa gaccaccatc accagcctcg agtagaaggc 29820
agctgtgtat tctaagcctg caaatagcag tgtgagtctt tgctccgggg ctctgcttca 29880
aaagagatgg taaagttagt acaatgttag agaatttcag gaaccaactg cgatcctttc 29940
ctcgatatca tcaaaggggt ggagagagag accaacaacg ctccatagca caggcccatc 30000
actcatgtgc ctgagaagct ggagccaagg atctgtctct tcaagactcc atctcaataa 30060
tggttcagtg acattttatg cccattggtg atagctaaac tagccccatt tcacctaaaa 30120
gcccacacct ggcaccgtag tttgtcctgt cttgcaaaaa atgccggtca agatggagat 30180
aagaaccgtg gcaggaacag atgcatctga tctcagtcac actgccaacc tattccttcc 30240
tcctgaggca gctcatgctg aggagtgctg gctagcacca gtggtacaca gctgaagacc 30300
atgactcgcc ttctcccaga attcccagca agaggcattg agcccaataa gtccccccctc 30360
cagccatgac taatttttga cagtgtccat cttctgatag cccttgaagg taactacagc 30420
ttctgtgagt ttatgattgt gatgactgtg gcattgtcaa aggatggcat ttgcaagtcc 30480
tctctgcctt ctggcttgca ttttctcttc ttcctccccc accttgttcc ccaagcctta 30540
ggagagtggc atctgtgtct tgttcagagc tgagcactca gccaccattt cttctcagtg 30600
cctgggcctc acatgcagtc cttgggcagt ggttggttgg tccagtaaca aataggcatg 30660
tcttgcctag caggtcttat ctagctctgg tgggtttcca agcatgtagc aagaagagtc 30720
tgcactgttt tgggagtctc tggagcatcc ctgaccaatg actgacatgg aagtgctcca 30780
aacctcctgc ttctggggtt tctgtttagt aacccacagc ctctaggaac agtgttatcc 30840
agacatgtag ggtatctctc ttctaatgtg tgcgtgtgtg tgtgtgtgtg tgtgtgtgtg 30900
tgtgtataat tgtgctacaa tatagtaagt ttacacactt gttttggtta accacccccca 30960
ccccatcccg tcctccccac ttctttctct aattaaatct ttccactcca aagagcatta 31020
ctgctattgc agagaacatg ggtttgcttc ccagaaccca cttggcagct tacagccata 31080
gtaactacag ttctggggag tccagtaccc ccttctggcc cctgcctgca ccagatacac 31140
acacacacac acacacacac acacacacac acacacatat catacactta gatacctgca 31200
ggcaagacat ttgtacatat aaactaaaaa ctaaatctta aacaaaaaaa aaatttccac 31260
tcaaagtctt caccctctct gttttcactt tatctgtgtc ttgctatccc ttctcccctta 31320
aagggaagaa ggacagaggg aggagggagg gaggaggaag ggagagaggg agagagagaa 31380
agagagagac agactcctag tttcctggct tccacaagtg ctccaaggta agcatgcata 31440
actaaagaat caaagctaag taagggctgg agagatggtt cagtggttaa gagcaatgac 31500
tgctcttcca aaggtcctga gttcagttcc cacatggtgg ctcacaacca tctgtactga 31560
gatctggtgc cctcttctgg cctccaggta tacatgcagg agaaatgctg tatacatgat 31620
aaataaatat ttacaaaaaa agaatcaaag ctaagagcca tatgtaagga tgtaacagca 31680
tctttctggg cctgagcaac actatatata tttttccagt tccatatgtt tacctatgaa 31740
taaaattcat aagtatatat gctttgttaa aaataacaaa acatttcagg atagccaggg 31800
ctacccagag aaactgtctt taaataaata aaacaaaaca aaacaaaaca aaacagatac 31860
caaatccaca agcagtccaa tcaatactga aacgctggtt ttgcaagcta ccggggtttt 31920
aatcatctta acgtttcttt ctctttccat ctttccactt ctttcctgcc cttcttcagc 31980
ttgagctttc ctcgccactg acgtcagcct tgtcctcctc acatctctct tcccactgca 32040
ggcctcatcc tcgaaccttc ctctcaccct tctcaggctc ctctcccctc accatatcac 32100
ccacagcatc acccttctgc agcccagtca ggaccttcct ggtcctctaa agtcagctgg 32160
gggaggggct tgcaggcctc aggttagtcc tagttaaaca gagctagcct tttcagacaa 32220
ctgatctcct tcaaaagacc caactactgc cttccgtttc cccgtaagtt cagatgttaa 32280
cctgtccaga ccttcaaaag tcctactgcc tctgagcttg agcttttca gtgtgggtaa 32340
tggggaattt tggaactgaa attaagtcta cacttaacaa aggaaggaac tcttcatcta 32400
caaattcagc caccagccag cctttccggt ttccatcatt tcatttggat catctagacc 32460
aagttctgga ataattgctt aggtcttccc ccacccccac ccccacccca cccctggcct 32520
ggtagatccc cctctccaca tccctgtttt ccttgttact tctcttcaga tttagttttc 32580
cgtgaggcaa gagtggagaa gggagagatg tactagcctg tgctcctgtg tcacactctt 32640
gctactcagt tccactctta aaatttctgg tcccagagga atagagatga cctcacatgc 32700

aaccctgcct tgactacttt tctattgctc taaggaggca acatggccac agcaacttgt 32760
aaaagcattt aatttggggt tgacagtttc tcagaggttg aatccatgac catcatggtg 32820
ggagcatacc cggaggcagg catggtggac aggcagtcgt gggatggctc tggagctgtt 32880
gcagagcact tatttgctga ttgaaagctc aaagcctacc cccagtgaca cacctcctcc 32940
aacagggcca cacccccta tccttctcaa acagttccac caagtattca aatatatgag 33000
cctatagggg ccattctcat tcaaacccca cccccacccc cgtggcccta ctaagggcat 33060
cagatagggc ctatggaaaa gttataaacc ctctcaccac cactctgggt tccagcaacc 33120
caaggccacc attttctact cttgcttaac caacaccacc caggatctct cagcctcagc 33180
ctggaatgag ggaaccctct tgtctctttt cattcaactc cgtattcttc cttcattcca 33240
cccatggatg gaaagattca ccccctccac tgtagagtaa cacacacgta tgacaagcca 33300
cttcactgcc ctgcatctta cttctgctct gaagttctgt cagccaaaac gtattgagca 33360
ctgaagactg tcagttgctg ctttgtgtgg tggttacaag ttaaggtccg actgtagctg 33420
tctgcttgct ggagagactg ggaaccagta gttgcttagc ccatggggct ggagacctca 33480
gcagttccag tgtggttctg aggagaaccc attccagcag cagcagaggt agccacagga 33540
tagcttgact cacaagactc atgaactcaa gaagaggaga gatgaacttg taagcagggt 33600
atgtgagctc acacctgagc ggtgaaggca agcaggtaag aagagcttcc cctcggacct 33660
tctgtctggg ccatctacac tcagatgggc ctcccacttc atttactaga agcaagcaaa 33720
tccctctcag gcgtgctgag gttaacctaa tcggcataac gcctcatagg tgtacccaga 33780
gcttgtcccg tgatactaga tcctgtcagg ttgaaaatgt taaccatctc aagggtcgta 33840
cacattccaa aaaggcactg tgttggctat tcttggttgt caacttgact acatctggaa 33900
ttaactaaaa cccaagtgac tgagtatgcc tgggagggag attttcttaa gtcatttgaa 33960
gtgggaagac ccacttttaa tccagaactt ctaaggtggg cagattcacc tttaatcagc 34020
ctatttcaat gacatggagg atggaagttt gttctctttg cctgctagcc cttgttggca 34080
agtccatcac ttcactgaac caaagcctgt aaggcattct tcctttgttt gttgggacag 34140
ggtttcctgt agccctggct atcctggtat tcagtctgta aaccaggctg gccttgaact 34200
cagagatcca agtgtctctg cttcccaagt gctgggatca aaggtctgaa ccactaataa 34260
attgtgtgtg tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg tgtgtacaca tatatatgag 34320
agggagtgag agagagagtc attctgtaaa ttctgttcct ctgagaaccc tgactaataa 34380
agctgcagac tgcttagtat ccttttttgtt ctctttgggg acacacacaa atgagtgaac 34440
ggactacagt gggcaacatt cttctatgtc tggtggctgc cctggggctg tttagtccac 34500
ccttgtgtga ggactctttt gctctcaagt gctggcatct gacctgtgcc cttttaaatc 34560
tgttgctaat tttgtctctg gggttccaag tagagacttt tcagtgatct ttcctcatga 34620
tgaaaatggg tgatctgtta ttggaagtcc ttggcctaag caagctctga tttaatctaa 34680
ctatatcatg tgctcttcta atctattgct ccgggtccct gagcattgct gtactcattc 34740
atgggtcatt ttgtcattaa tctggctcaa tccatgttca caatgatgat ttgataaagg 34800
ctgaaaatgt gaagtggatg gtaacagttc tgtgccctgg attccaacaa agagatgcat 34860
gctcctccag cccactctgg gtgactctag gggacggaga caagggtctt acagagatgt 34920
cagagtatct gactccttga cagctagtgg cctcacaggg agactcatca ggggtcaatg 34980
ctctttctgg taagatgaac tccagctcac cctgcatctt gatctgtcca cactgcttgg 35040
tgttgagact tcctgtagcc atgtaaagtg ggacatctgg cctactggtg attctctaag 35100
aaggaatttc caccaagcag gacacctgaa cactttctta acattgactc ttactttggc 35160
taccaaaaga agcctttgag ccctatgtgg tagcacagac ctgcaatccc agtactcagg 35220
aggtagatga ggtggatctg gagttctagg tcatccttgg ttgcatagca agtttatatt 35280
tgagcttggc cttggctgca tgaaaccctt gtcttccagg agacaaaaac aaaaacaggc 35340
aaatttccct taagaagctc acactccgcc tatccactgt gcttgccttc ttcccaatca 35400
ctatggcctc ctctcctcca ttaacgccca tgcttaaagg gtcttctaaa aatgtctttt 35460
agtaaactcc aattctacta catttaaaga agggggaagg tgagccccac atgctacacc 35520
ccacagttcc agggtgctag gcttccggct gggggctgcc tcttggtact gccttgccct 35580
ggaatgtcag ttcagctaaa ggcctcacac aaaagatgaa agccctgagt cctcttactg 35640
cttcttagca cacaagcagt ttccttcact cccctaggtc ttagcaggcc ttcatcttca 35700
agggttctct ttccctctat tctgccttct ctgtctctct ctctctctct ctctctctcc 35760
ctccctccct ccctccctcc cttcctccct ctctctctcc ctctctctcc ctccctctct 35820
ctctctctct ctccctccct tcctccctcc ctccctccct tcctttcttt cctttcattt 35880
tctttccctt tttgtccctt catgagaaaa agcatatttg taaatcccaa tttaaaatat 35940
aaataaacga aaacagtaag tctcaaccaa atgaggccta aatcagccct ggaagattag 36000
tacctgtttc tactcaagtt aataatttac tctgtgtccc tctgtgcatg cttggcttca 36060
acagaggatc tttaacatgg gatgcaactt cgccagagag cttcagttct caggaggcat 36120
gtggacatcg tggaggttga ggaggggcag atggatgctg ggaagcaaat ggaaagcctg 36180
aggttccaag tcaaatctgt gactcacgca gtaaggaggt ttgagctggg gctgcccaag 36240
ggaggagggc tactacaggc aatgattaag atttatgtat ttattttatg tatgagtaca 36300
ctgtcgttgt ataggtggtt gtgagccttc atgtggttgt tgggaattga atttaggacc 36360
tcggctcact ctgatcaacc ccgctcgttc cagcccaaag atttatttat tattatacat 36420
aagtacactg tagctgactt cagacacacc agaagagggc atcagatctc attacgggtg 36480

```
gttatgaacc accttgtggc tgctgggatt tgaactcagg accttctgaa gagaagtccg 36540
tgctcttacc cactgagcca tctcaccacc cccttaaatt gttattttta aaactatatg 36600
aaataaactt taccatctaa atggggaggg gtgaccagtc tccgcacata ggaggtataa 36660
gggcaggaag atcagatctt aaaggtcagc ctacatgaga ccctgtctca taaaaaccaa 36720
gtaattaata atagcaatta ataattaata ataataggac agcagtagca ctatttggtt 36780
gctggggata cagctctagt agaacactta gccaaagggt cctaaattca atgttgagga 36840
cagccaaaaa taaaataaaa agttccatgt tgttccccca cacacacttt ttttttttt 36900
tgaatgactc tcactatgta gccctgcctg gtctgcaatg tactatgtag cctaggctag 36960
cctcatactc aaaagagggc tagcctgcca ctacctctgc ctctagagta ctagaattat 37020
cagcatgctc aggcacactg ggtcttgttt gttttttga gacaagatct catgaatccc 37080
ccactggcct cagattctcc atgtagtcaa cgataatctt gaatttatac tggaaaatgg 37140
tagcaatctg gagagtaaca agacaggagc tgactgtgtg tatgtagccc aggatgacct 37200
tgaagcctgc cttggcctac agagcgctgg gactataggg gtatcccact gtgcttgcct 37260
gcctctatgt aaaggtggaa cgaatttccc ctgtgcctgt ggaccacgtt tctctgaccc 37320
actcatccac cagtgggcgt ttggcttgac cccacatctc ttggccactg gggatgatct 37380
gaacccagtg cattcttctc aaaatacact gaggtgggat cattggatca cagacgttct 37440
tagagcctag cctacccccc ggggctacag gaagctcaca gtttctgttg gttgattggt 37500
tggtttgccc ctccccaaac ccctgccacc tccccccaac ctgggtttct ctctgtggct 37560
ctcttgatgt cttcaaactc actctgtaaa ccaggctgac cctgacctca gagctctgcc 37620
tgtctctgcc tccctagtgt tgggattaaa gacatgtacc atcggctata cctacagacg 37680
tgctcaaggt atgtacagag cactcaccct ggcatccctt cacctgccta agagactaag 37740
gatcagaagt aaaccctacc tgcttctctg gaagattcag gttttcctca gggtactgca 37800
gcctctcaac ctagcatggt ctgggcctta tccttacgaa tgtacactca aacacaaaga 37860
caaggctctc ccagcctgcc ctaataactt ttttcaccaa acaggtcatg agtcaatggt 37920
gccccgatat tgtctaggca atagtcattc tgggactaca ggccttggta cccaacatga 37980
ctccctcaaa gccaagattg tgagcatgtc actgaggcca ctctgtgagc ttgtttccat 38040
gtcaacggag ctcatgatgt cagaaggctg aatccagacc ctgcacccag gctgtgtgtt 38100
tccagctcca ccccagagca tatcccagtc cagctggctc tttggaacca ttaaagagtg 38160
ataggtgctg actatgtgtg cagagagtga tcctagcagc acaggacaca aatcctcacc 38220
ctggggaaag cagccttcaa cctctcaccc ttaaggggaa gggcaaccat ggaacagcat 38280
ctgtcagccc tccctcacaa ccccccaggc tggcctagcc acaccctgcc acttctatcc 38340
aggcagcagg gcttcctttc cagagcaggg ggggtggggt cagggaggag cctggggatt 38400
agggagggac actgagttct tcaagcaaga actgttcccc atctaaggcc atcccctcct 38460
ccagccccag ctatgcaggg agcctggctg ctgctgctgc tgggcctcag gcttcagctg 38520
tcctttggtg tcattccagg taaggaggct cccctaactg cttgtcccca ctcacaagca 38580
cagccttcca ctgacacctg cctccggtct ccccccttggc cagtggagga gaagaactcg 38640
gccttctgga atcaaaaggc gaagaaggcc ctggatgttg ccaaaaagct gcagcccatt 38700
cagacatcag ccaggaacct catcatcttc ctgggagaca gtgagtgtgt gagcacggcc 38760
tggccaccct ggggcccccc gagctccagg catccattga tgtgtccagg aaagcctggt 38820
gttcagatcg aaccagattc tgtttttgta gggttggggg tgcccacggt gacagccacc 38880
aggatc                                                           38886


<210> 13
<211> 1784
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (3)..(1451)

<400> 13
gc aac ttc aaa gtg gga gtt cac att gct gac gtg agt tac ttt gtt    47
   Asn Phe Lys Val Gly Val His Ile Ala Asp Val Ser Tyr Phe Val
     1               5                  10                  15

ccg gag gga tct gat ctg gat aaa gtg gct gcc gag agg gct aca agc   95
Pro Glu Gly Ser Asp Leu Asp Lys Val Ala Ala Glu Arg Ala Thr Ser
                 20                  25                  30

gtc tac ttg gtt caa aag gtg gtc ccc atg ctt ccc agg ctg ctg tgt   143
Val Tyr Leu Val Gln Lys Val Val Pro Met Leu Pro Arg Leu Leu Cys
```

```
                35                  40                  45

gag gag ctg tgc agc ctc aac ccc atg tcc gac aag ctg acc ttc tct   191
Glu Glu Leu Cys Ser Leu Asn Pro Met Ser Asp Lys Leu Thr Phe Ser
         50                  55                  60

gtg atc tgg aca ctg act cca gag ggc aag atc ctt gat gaa tgg ttt   239
Val Ile Trp Thr Leu Thr Pro Glu Gly Lys Ile Leu Asp Glu Trp Phe
     65                  70                  75

ggc cgg acc atc atc cgc tcc tgc acc aaa ctt agc tac gag cat gca   287
Gly Arg Thr Ile Ile Arg Ser Cys Thr Lys Leu Ser Tyr Glu His Ala
 80                  85                  90                  95

cag agc atg att gaa agc cca act gag aaa atc cct gcg aaa gag ctg   335
Gln Ser Met Ile Glu Ser Pro Thr Glu Lys Ile Pro Ala Lys Glu Leu
                100                 105                 110

ccc ccc att tcc cca gag cat agc agc gag gag gta cac cag gcc gtc   383
Pro Pro Ile Ser Pro Glu His Ser Ser Glu Glu Val His Gln Ala Val
            115                 120                 125

ttg aat ctc cac gga att gcc aag cag tta cgc cag cag cgc ttt gtg   431
Leu Asn Leu His Gly Ile Ala Lys Gln Leu Arg Gln Gln Arg Phe Val
        130                 135                 140

gac ggc gca ctt cgt ttg gat cag cta aag ctt gct ttc act ctg gac   479
Asp Gly Ala Leu Arg Leu Asp Gln Leu Lys Leu Ala Phe Thr Leu Asp
    145                 150                 155

cac gag acc gga ttg cct caa gga tgt cat atc tat gag tac cgc gag   527
His Glu Thr Gly Leu Pro Gln Gly Cys His Ile Tyr Glu Tyr Arg Glu
160                 165                 170                 175

agc aac aag ctc gtg gag gag ttc atg ctc ttg gcc aac atg gca gtg   575
Ser Asn Lys Leu Val Glu Glu Phe Met Leu Leu Ala Asn Met Ala Val
                180                 185                 190

gcc cac aag atc cac cgc gcc ttc ccc gag cag gcc ctg ctg cgc cgg   623
Ala His Lys Ile His Arg Ala Phe Pro Glu Gln Ala Leu Leu Arg Arg
            195                 200                 205

cac ccc ccg ccc caa aca agg atg ctc agt gac ctg gtg gaa ttc tgc   671
His Pro Pro Pro Gln Thr Arg Met Leu Ser Asp Leu Val Glu Phe Cys
        210                 215                 220

gac cag atg ggg ctg ccc gtg gac ttc agc tcc gca gga gcc ctc aat   719
Asp Gln Met Gly Leu Pro Val Asp Phe Ser Ser Ala Gly Ala Leu Asn
    225                 230                 235

aaa agc ctg acc caa aca ttt gga gat gac aag tac tca ctg gcc cgc   767
Lys Ser Leu Thr Gln Thr Phe Gly Asp Asp Lys Tyr Ser Leu Ala Arg
240                 245                 250                 255

aag gag gtg ctc acc aac atg tgc tcc cgg ccc atg cag atg gca ctg   815
Lys Glu Val Leu Thr Asn Met Cys Ser Arg Pro Met Gln Met Ala Leu
                260                 265                 270

tac ttc tgc tcg ggg ctg ctg cag gac cca gcg cag ttc cgg cac tac   863
Tyr Phe Cys Ser Gly Leu Leu Gln Asp Pro Ala Gln Phe Arg His Tyr
            275                 280                 285

gcg ctc aat gtg ccc ctg tac aca cac ttc acc tcg ccc atc cgc cgc   911
```

```
Ala Leu Asn Val Pro Leu Tyr Thr His Phe Thr Ser Pro Ile Arg Arg
        290                 295                 300

ttt gcc gac gtc ctg gtg cac cgc ctc ctg gct gcc gcg tta ggc tat   959
Phe Ala Asp Val Leu Val His Arg Leu Leu Ala Ala Ala Leu Gly Tyr
    305                 310                 315

agg gag cga cta gac atg gcg ccc gat acc ctg cag aaa cag gcg gac   1007
Arg Glu Arg Leu Asp Met Ala Pro Asp Thr Leu Gln Lys Gln Ala Asp
320                 325                 330                 335

cac tgt aac gac cgc cgc atg gcg tcc aag cgc gtg cag gag ctc agt   1055
His Cys Asn Asp Arg Arg Met Ala Ser Lys Arg Val Gln Glu Leu Ser
                340                 345                 350

acc agt ctc ttc ttt gct gtt ctg gtc aag gag agt ggc ccc ctg gag   1103
Thr Ser Leu Phe Phe Ala Val Leu Val Lys Glu Ser Gly Pro Leu Glu
            355                 360                 365

tca gaa gcc atg gtg atg ggc atc ctg aag caa gcc ttc gac gtg ctg   1151
Ser Glu Ala Met Val Met Gly Ile Leu Lys Gln Ala Phe Asp Val Leu
        370                 375                 380

gtg ctg cgc tac ggc gtg cag aag cgc atc tac tgc aac gca ctg gcc   1199
Val Leu Arg Tyr Gly Val Gln Lys Arg Ile Tyr Cys Asn Ala Leu Ala
    385                 390                 395

ctg cgg tcc cac cac ttc cag aag gtg ggc aag aag ccg gaa ctc acg   1247
Leu Arg Ser His His Phe Gln Lys Val Gly Lys Lys Pro Glu Leu Thr
400                 405                 410                 415

ctg gtc tgg gag cct gag gac atg gag cag gag cca gca cag cag gtc   1295
Leu Val Trp Glu Pro Glu Asp Met Glu Gln Glu Pro Ala Gln Gln Val
                420                 425                 430

atc acc atc ttc agc ctg gtg gag gtg gtc ctg cag gca gag tcc aca   1343
Ile Thr Ile Phe Ser Leu Val Glu Val Val Leu Gln Ala Glu Ser Thr
            435                 440                 445

gcc ctc aag tac agc gcc atc ctg aag cgg cca ggc acc cag ggc cac   1391
Ala Leu Lys Tyr Ser Ala Ile Leu Lys Arg Pro Gly Thr Gln Gly His
        450                 455                 460

ctg ggc cct gag aag gag gag gag gag tct gac ggt gag ccc gag gac   1439
Leu Gly Pro Glu Lys Glu Glu Glu Glu Ser Asp Gly Glu Pro Glu Asp
    465                 470                 475

tca agc acc agc tgagctccac cagccgcctg ccccgcctgc cccgcctgcc       1491
Ser Ser Thr Ser
480

tgtcccgcca cactggcttt aggacctgtt gacacggagg ggggttttta atttggtttt 1551

taacaactca ggggtttgtt tttatttta tttaattttt gcagctcaac ttttaaacaa 1611

actgcagggg agagggtggg gctggaagga aggctgaggc ctggtcagca gtgaccccag 1671

cagagcaggc cccagtcctc ctgggaggct ggcccccctt ttttctgggc cctactgccc 1731

tcctctgccc aggaaatggg ggggtttcag caactcagtg tcacagaata aaa        1784
```

<210> 14

<211> 483
<212> PRT
<213> Homo sapiens

<400> 14

```
Asn Phe Lys Val Gly Val His Ile Ala Asp Val Ser Tyr Phe Val Pro
  1               5                  10                  15

Glu Gly Ser Asp Leu Asp Lys Val Ala Ala Glu Arg Ala Thr Ser Val
             20                  25                  30

Tyr Leu Val Gln Lys Val Val Pro Met Leu Pro Arg Leu Leu Cys Glu
         35                  40                  45

Glu Leu Cys Ser Leu Asn Pro Met Ser Asp Lys Leu Thr Phe Ser Val
     50                  55                  60

Ile Trp Thr Leu Thr Pro Glu Gly Lys Ile Leu Asp Glu Trp Phe Gly
 65                  70                  75                  80

Arg Thr Ile Ile Arg Ser Cys Thr Lys Leu Ser Tyr Glu His Ala Gln
                 85                  90                  95

Ser Met Ile Glu Ser Pro Thr Glu Lys Ile Pro Ala Lys Glu Leu Pro
            100                 105                 110

Pro Ile Ser Pro Glu His Ser Ser Glu Glu Val His Gln Ala Val Leu
        115                 120                 125

Asn Leu His Gly Ile Ala Lys Gln Leu Arg Gln Gln Arg Phe Val Asp
    130                 135                 140

Gly Ala Leu Arg Leu Asp Gln Leu Lys Leu Ala Phe Thr Leu Asp His
145                 150                 155                 160

Glu Thr Gly Leu Pro Gln Gly Cys His Ile Tyr Glu Tyr Arg Glu Ser
                165                 170                 175

Asn Lys Leu Val Glu Glu Phe Met Leu Leu Ala Asn Met Ala Val Ala
            180                 185                 190

His Lys Ile His Arg Ala Phe Pro Glu Gln Ala Leu Leu Arg Arg His
        195                 200                 205

Pro Pro Pro Gln Thr Arg Met Leu Ser Asp Leu Val Glu Phe Cys Asp
    210                 215                 220

Gln Met Gly Leu Pro Val Asp Phe Ser Ser Ala Gly Ala Leu Asn Lys
225                 230                 235                 240

Ser Leu Thr Gln Thr Phe Gly Asp Asp Lys Tyr Ser Leu Ala Arg Lys
                245                 250                 255

Glu Val Leu Thr Asn Met Cys Ser Arg Pro Met Gln Met Ala Leu Tyr
            260                 265                 270

Phe Cys Ser Gly Leu Leu Gln Asp Pro Ala Gln Phe Arg His Tyr Ala
        275                 280                 285

Leu Asn Val Pro Leu Tyr Thr His Phe Thr Ser Pro Ile Arg Arg Phe
    290                 295                 300

Ala Asp Val Leu Val His Arg Leu Leu Ala Ala Ala Leu Gly Tyr Arg
```

```
305                 310                 315                 320

Glu Arg Leu Asp Met Ala Pro Asp Thr Leu Gln Lys Gln Ala Asp His
                325                 330                 335

Cys Asn Asp Arg Arg Met Ala Ser Lys Arg Val Gln Glu Leu Ser Thr
            340                 345                 350

Ser Leu Phe Phe Ala Val Leu Val Lys Glu Ser Gly Pro Leu Glu Ser
        355                 360                 365

Glu Ala Met Val Met Gly Ile Leu Lys Gln Ala Phe Asp Val Leu Val
    370                 375                 380

Leu Arg Tyr Gly Val Gln Lys Arg Ile Tyr Cys Asn Ala Leu Ala Leu
385                 390                 395                 400

Arg Ser His His Phe Gln Lys Val Gly Lys Lys Pro Glu Leu Thr Leu
                405                 410                 415

Val Trp Glu Pro Glu Asp Met Glu Gln Glu Pro Ala Gln Gln Val Ile
            420                 425                 430

Thr Ile Phe Ser Leu Val Glu Val Val Leu Gln Ala Glu Ser Thr Ala
        435                 440                 445

Leu Lys Tyr Ser Ala Ile Leu Lys Arg Pro Gly Thr Gln Gly His Leu
    450                 455                 460

Gly Pro Glu Lys Glu Glu Glu Glu Ser Asp Gly Glu Pro Glu Asp Ser
465                 470                 475                 480

Ser Thr Ser
```

<210> 15
<211> 49999
<212> DNA
<213> Homo sapiens

<400> 15

```
gaattcacat aaagttcagt tcctcgatcg cagggcaggt ttcactgctc ccagtgaccc 60
agcgacacag ctgcgtgcct gtcagaatga ggcagctaag cttggagtca tgctggttcc 120
tctcagcttt ccagacagcc ctctcctctg tgggaaacag atctgttatg ttaccccata 180
gcagccagga tctcttaagt ggacttaagt attcctttat gtattacagc tacaggattg 240
ggcggaaaaa cctgaagaat gccctgtagg aaggtggtct ctgagtgtca caccagatga 300
agaataggga atcttaaatt cttttccttg cctgaacccc ttttttcaag catcccacgt 360
ttaagcattt ttccatttta aaaactgagg gaagaattat cccccagtga aggagtagga 420
ggataataag tagctacaca gtttgcagat aaaatgtgtg ataccttagg actgatcatt 480
caggttacca aaagagcaga tggtactgtg ttaataagtt cttctaagcc aacttgggta 540
tgagtcaaga ctctgtcagt gagtcataat ggaaagggaa ttgatccact cattaactgc 600
caagtccaca ggtagactag tttcaggctc agctggatcc tgaagttcaa atgaggtcat 660
aattcttctt ttctttctta gactattatt ttctgtattg gcatgattat gtagcataga 720
tgtttcctgg cagctccagg tttatgtggt ccttagtgcc taggatccca ggagagagac 780
cctctttcct gaagttcata tcatttatca atacaacaag ttgtattgtt caactgaagc 840
aaattcagca ctatgcttgt atcttccatg tgcttctctc tgcccattgt atatctttaa 900
actgtatact tattttattt tattatttta ttttttcgag acaaagcctt gctctgttgc 960
ccaggctgaa gtgcagtggc acaatctcag ctcactacaa cctctgcctc caaggttcaa 1020
gcagttctcc tgcctcagcc ccctgagtag ctgggactac aggtgtgtgc caccacacct 1080
ggctaatttt tatttttagt agagatgggg ttttgccatg ttggccaggc tggtctcaaa 1140
ctcctggcct caagtgatcc gccagccttg acctcccaaa gtgctgggat tacaggcatg 1200
```

agccaccgtg cccagcctat atacttattt tacatgtata ctctttttt gtaattggtt 1260
cattttctgt attttcatac acacatacat gtatatgtat gtacgtatgt atatactctt 1320
gtatgtatgt gtatattttt attttcacat acactatatt tgataggtga tttacagtat 1380
gttcaagaat aaatcttaag tttataacct aactaccctc cctcatttaa ggtacagttc 1440
taacagcctt ggtcacctga ccaactctct ggtaaacctg gtagggaggg cagggcctat 1500
taaaagacag ctccaccagg aagggaagga gcagttctaa aaggaaaaag aaagtgggtc 1560
ctttaccaga gggaaaagac agaccgactg ttgattcatt cattcaacaa gtacttcttg 1620
aggacctatt atgtgccagg tactcttcca ggccttgggt aacagtgaac attacacaaa 1680
aggccttatt tgctggagct tacatggtag ggagagagac agataacaaa cacacaagcc 1740
gatagagata tgccgtgata tctggtagtg atgagagctc tgaagaaaga ccacggtaag 1800
cctcaacagg tgtggagtac gtgctttaca gtgcagatgg aggaaatggt tgggggcggg 1860
gtggtgggga gttggaggag acagacaggt ggaggaaatg gtgggagggg ggtagaggaa 1920
cctcttcttg tttggggatt ctctttcagt tgacccaaat aaagtaagga agattttgat 1980
aggcagatcc tgttaagact atcccaagca taggaaaaag tatgagccaa gccaacatct 2040
aaatggcttg agggaagatc tgttcaggaa atggaaagag gtttcccatg acagctacat 2100
acagagcatg tgaaggatgg ggctgaggtt gcttggggtg tgaccctgta aggacatgaa 2160
taacaggcta agagtacctt tcccagaccc acatttagaa agatcacagc aaagtgtgga 2220
gggccaggtg agggggcac agaggcgagg tagggcagcc aggtgtgggc tgaatagggc 2280
aatggccaga gggaatggga aggaagggca gagctttcag aggcttcatc tgtaggattt 2340
ggggattaat tcacttctag tgacctaaaa ggatttgttc atcacccaga atgagccata 2400
tcttcttatg tttactcaaa gataagaagc ctttagaaat gggaaacatc ttgggaaagt 2460
ggttaatctt gtttattcac aagaacaatt tcatcatctt ttgctataca atgaggaaag 2520
tgacagtagt gcgggtcaca gagggaggtg gccaaggaag gaagcaagca agactagatg 2580
tgtcacctaa ctgcaggtcc tgtggcctct gggagtgaca tacattctag gaaaggactc 2640
ctgggagaga atgctgtggc cttccacgcc agcctgatag tccttctcgt gcatttacag 2700
gcaacttcaa agtgggagtt cacattgctg acgtgagtta ctttgttccg gagggatctg 2760
atctggataa agtggctgcc gagagggcta caagcgtcta cttggttcaa aaggtaaaaa 2820
tccatctcta gtttcttttt tcttgctttg tttatttgtt tgtttccctg gaagagtgtg 2880
tgctctctgt tattacatgt tctccggaaa gagaagccaa aggaagacac aggtgttcat 2940
ctgaggcctc atcccagagt ggccctgcta tataagtaac tgacagatac tcagcttcag 3000
aaagaaagga ggcaaaatac ctgctttcaa acgattgttc taaagcaggg ctcggcaaac 3060
tcagcccaca ctagcgacta gtttttgtaa ggttttattg gaactcaggc acatgcattt 3120
gttcatgtat tgtggctgct ttcacactac ttcagcagag tggcatgacg atttcctatt 3180
actgtaagcc ctttaaggaa atgttttcaa cccctgttct aaaaggtggg agccaatctg 3240
gtcctgacct gcccattaca agatagctat gggagtctcc gagatggaaa agcgaaggga 3300
gataaggagg agcctgagct tttccctctc atcctgactg caccactctt ggttagttac 3360
taagtgtcta cagacctccc tagactcatc tgtgaaatga agggactgga cagattcatc 3420
tcaaaacatc ccttccattc tgtgtacttg gacctggcac attcaatagg taaccatgag 3480
aatccattcc tttaacacat atatattgag caccaattat ctgatggtca ctgcagtagg 3540
cctcagagaa aggggttaat aagagaccaa gcatgagtaa gttctgccct ccacactgtg 3600
gttcatgaat tctgccaggt ttctttctct tctttccctt ctctgatcct ctgctcattt 3660
gctcatcttc cttcttcggc catatctgga cttccacttc ctttctagct ttttaaaatt 3720
tggcagtcca gtttgggatt ctgcctatac tagcttgagc cttcctgcct cccaagccca 3780
tgccctagga catgattctg gtatttgctc attgactgcc ctaaggtcag aggaatatcc 3840
ccaccatcca ccctagaatg cagcaccaca ggtgcattct agaatttctg ggctccactt 3900
ctagcaaagt gcctacttga tgttcacaaa ggtattggca cttctggagc aaaagctatc 3960
caggaaagcc caaaagtttc taggatttct ggtatttacc aagtgttact gagagttcct 4020
ctcatgtttt caacttgtcc accctgaaaa ctaacctctc aaaagggaag agaccagtct 4080
aggctttgag tgcagccata tcctctaggg gctgaagatc ctgttgcctg tggcccaagt 4140
ttagttcccc cagtgtagct gagcttatca gttgacagtg atgtcttcca ccccatggtg 4200
gaaatcacct tgtctgagac cctttgctcc tgctacaaag ggagctagcc tagatgggct 4260
ctcttgtccc aaaggaaagc cagagctgtt atctgccata gccgccttca atatgtggag 4320
gccctaccta ggaagacctg gcacctcctc tcccctgccc caggacagta ctctctggat 4380
cactgaaacc tagaatattt gagcaaaacc ctagctccac ctgctccagg agacttgtac 4440
agccgatttc ttcagaagta cagctttgcc taccattcac attaggtgat cagaaccacc 4500
atgtacgtgt tttctgccat cccagaagtg agaatagtga atagagagga agacagagtt 4560
gatcagagcc aggaaattct gagtcagaag ctgtgtgatc atcaaaaccc cattccaggt 4620
aactgtgtca tgggcaatag gtaatctcaa tgcacagtga tgcctgaaag acccagcacc 4680
ttcagtgacc aattagtgag aatagttagc tgtgtcctca tctgagcagg gggaattccg 4740
taccagactt tgcttgtgtc aaacgtactg tgtccctccc tgacctctgt ggctggccta 4800
agcctaaatg caatgtttaa gaacttctct ttgccccccg acccctcaca atgtctatga 4860
cacctgagtc caagctctga gcaggtatag gcagcttaag agaatgcagt gcaaacttct 4920
gacccacaag tatctctctt gagtacatgg ggcttcctcc ctgaccccca tggccatgaa 4980

gccacggcca tgcactagct gctgcgctct ccttttataa ccaggaatta cttttcaaaa 5040
tcagaaaatg aaaaaatcaa attgggttaa gtaattaagc atgtttcctt ttctgtttcc 5100
tttggttttg tgtttgtcac agttctagaa tttctctgtg ggactacaga gttggggctc 5160
tgctgctgag ttgtgaaagt ggggagctgg gtggaggaag ggcccgcacg cctctgctgc 5220
ccggcactgc ctccagcttg gcaggcacaa gtggcgccgg cccgcaacct tggacagcag 5280
cagctgtgcg ctctgattcc tttgaaccgc tgctctgacc tttcttccta ctcggttttg 5340
tttcttaaag gactgtgtcc aggaactttt ctgctgtttt cactttactt tgcctataaa 5400
ggtcttctga aaagctggat gagctgtgtt tccgccctcc atattctctg ctttctcact 5460
tggcacaatc atttctccca gcttcatcac acaggggaag gggggctggg gttccagttc 5520
atttcccatc tatagggaat gtggcactga tttcattcag atctgtaagt gactgatgcc 5580
agaactgcaa tcttagctcc ttatctaaac tctaattggg ggattaaccc atggagtagg 5640
acagtataca gtgtaacagg tcttgggtcc aaataccacc tcactgactt taaatgaaat 5700
tctttttgtt gagattttgc tcacagtaat aagtatttgg ttattcttgt taacaatagg 5760
gtataatcag gtggaaatat aaatttaggt agtgtccatt taaatatcag gaaaaaactt 5820
tttgacaaaa gatgattccg ttagataggg gacacctgcc cacctgaatt ttggtctgtc 5880
tttctcagaa ggacacaaca tttgctcagt taatgcctct caactgtctt ctctgggaga 5940
taaatataat gtaattgcca agtttaaagt aattttagaa aataagccaa ttaagcttta 6000
aaagtaaaag aaaacctaaa cagttgaaac ctaaacctaa attttctgcc tattggccca 6060
agcattcatg ttattttagg tgcgaaacag ctcaagtgaa agttcgccca taaatctcta 6120
cgatatttta ttggtactgc tttataatag agatcaaaga ttgggattgg aagcctgtct 6180
taatgtagag tccaaagagt tttaagatgt ttctttctga caccagcagg ttgtcagagt 6240
gttgatgttt tgttaacgtc aaactgtgta gcaaagagtt gatcaaattc tgaattcatg 6300
gaagtgttga tatggaaaag aaaactcttt aaacagagat gttggctggc aagtgaatta 6360
atctatttcc tttaagttat ttcagtgtgt aagtagggag ctagctgagt gtaccttgtt 6420
gttaaaacct cgaagtcctc ggagaaaagg gggaaaagtc accaattctc agactgcaga 6480
tatgggctgc gatggccaat gggttatcgc actgaaggcc tgagggagtg tgggtgggga 6540
gccagcaaag gcctgggctg aaaggggcag aagaggccct gcaacctctc caggtagtgg 6600
agaagcccct atgacttggc ttgtgggcat ctggctccca catcactgct agtccttcct 6660
gctcctcctt gcctgaatga ttgattcttc ccttctgtgg ccctttgtgt tggtcacagg 6720
gctgtcctgg ctaacctgct gctgaacttg gccagcctgc ccactgtggc tttagcagat 6780
gtttctgctc tctgaggcta atataaggtt ttatagtctt gttggtaccc ccacccagct 6840
gccttgggca gtggtgtatt tacccaaatg ataaatttct ctctactctc tcaagacctg 6900
gtccagaatg cttagaaagt cagtgtccta tcatcactat ccctttttctc cacggccagc 6960
tcttaagctc tgccctgact caactttggt cctggcccca aagcatgctt aagaggactt 7020
agcatccttc aagccccgtt tccttttctg ctgcctgaag tgcttatcag tcttcctcca 7080
cttggtattt attgagtacc agctgtgtgt catgttcgag ggatgtaaag atgagacaga 7140
ttctggtctt gccctgggga agcagaggag gtggacaggt agcaaacact tgcaatgcat 7200
caggctacct tcaggtacag aagtgcccca aaggtgagga ggtgttagag aagagagagg 7260
ggttgtatct gcctgggctg gtggtgggag aggagcttct gcaaggtcca agaaggcttc 7320
acaaagcaat cgtgttttga acagtgtttc acattttgag tagaaaattt ctagatagac 7380
aaaaatgggc agagagggca ttccaggcag aggctagaaa aagcagagaa cattcaagga 7440
gcagtatgca gtttggaatt cttggggtgt gagttgtaga gagagccacg gatgaggtta 7500
caaagagaag cctggagtgg taggcgaagg agctcagatt ttgagggcaa gtagggaagt 7560
gatacggtct ccttccacca agatagaaaa tcaccttagc aactgtgtgg ttgaaggata 7620
gtgaggccag aggcaggaaa attgtcatca gtacctgggc cctttccccc agtcatatcc 7680
tcttgaggct ctgaataact accccaacac agagatcttt gctcacaaaa tcttatgaga 7740
gtttaccaat gtggtaatgt ctaactggac cccaggagaa ctaggacaat agatgtcttc 7800
agcctagtgc caaatggaca ttctgaacaa gcagcatttc agttacttca aattgtagtt 7860
tcttcccaat tctggcaatg catatcacac aagaagaagt agggagaagc aaagggcagg 7920
gaaaatggag aagttagctt cccactgtta tctttgctgt cccctcggag atagggtcct 7980
tctcccgctt ccctgtgggg aactcttggc cacctgtgac cttagccact gaacattgag 8040
ggtgcaggct tttccaaaaa ccttttggcc ccatggaacc ctctaggccc tccttcatcc 8100
acaggacatg caaaagtcca tttactaaat tcagctcctt agctattggg aaggtaaagc 8160
cagtgtgtcc taacataaat ggaattgcag attatcattg agtggagatt agtaagaaga 8220
tgcagaagtc tggagaataa acaagtctta tctagaataa tttctacttc agaattgtca 8280
ctggttttta tctgagagag gaagagagac atatccacac ttgaatagtg gaaggaggag 8340
aggaaaagac tcatttgaga gcgttagaat gtcagatcta ggcttgggaa gtgattggat 8400
gtagaaggga gagagaggag agtgaagaat cacaggcaaa tccccagctg tgttctgggg 8460
acaggggtga ggagtgtggg gagacatggg tgtggtgttt tgatttttgg tggttttgag 8520
ggaggggtgg tcgtttgctt ccttgcttat ttaacttggg acagagcgct gctcttaaca 8580
gaggtaggaa atgtagtcag tggaacaggt aaagaaggga ggaaaatgct gaactttgtc 8640
ttctccatgt ggagtttgaa acattcatgg gacatccagt tcatggtatc cagagggcat 8700
tgtagacgta tgtggagtca caaggccaga tggccagacc ttggacaggg aagacactcg 8760

ttgtgagatg gcaggagacg agggcacaca tgtaaagtga gtgggcctgg gagaaattgg 8820
ccaaaggaag gagctggaag gttgcttgca acagattgag tctgatgatc tcagttttct 8880
ctgtgaagaa gagttgaggt tttctgctga gaaagattgg gaaggcagtc aggtaagagg 8940
tctgaggaga atagtaacat tttgggacct cttctgaggg gcgtggggaa ggagctaaca 9000
aagagaggtg aaaggcctgc caaccctcat ggaggtaaga actaagacag cttagcaact 9060
cacctccaca cggcccagca gttttctctg tcactgctca gtgaggactt gcagaagtag 9120
gaaagggcga ttataagatc gatcataggg tttgtggagc tgggatagta gaagtgaggg 9180
aaataaagaa ccttgaagaa attatccatg tggttcacac tgcatagcaa agttaatgag 9240
gacaagacag gataagactg gggaaaagga tcaaggggtc agggaatgta tgaacatttg 9300
cacagttcta atgatagcca ggagtttccc agctcctgga gagacctttc ttttccagtc 9360
agacatggtg ttccacactt atcaccctga cccagaggct ctcaggaacc atcgcaggcc 9420
tcatgtagct gacctgggtg catggactgt tgcgccatgg tccaggtggg tctccccctg 9480
acataatggg acttggattt gagaaagcag ctgatcagaa ggggctgcct gcctctcctt 9540
tccagccctc ctccacaggg atcctgctgt gcctggggtt gtgggagagc acattcacag 9600
tgaccctggc aggaattagg ccccatttat gagaggctgt gatgtgccaa accacaaatg 9660
tgattgtaac ctcttaattc cttttccttt gaaacataga ggaataacca tctatttaca 9720
aaactatata tacctaaaga ctgttttcta tgagaatttc gtctgaattc tgctttaaga 9780
cctggtaaat gtcttttata aaaaatactt cttaaaaatt aaatataatt atactaacca 9840
aaaagtttta aagttcagct ttttcatgag cacttagatt ggtaactgac cattgcagtg 9900
tgattaataa aatgtcttct gtgtaagata taggatacca cacagttttt atagcctgca 9960
caaccactgc atgtgctggt aagttttagg ttagtagcca aaacagtgta gcttatactt 10020
aaaatactag ttgtttatga agtttttttt gtcaagatgt ttaaatataa gtctctagta 10080
tatttcataa aatgttttat gtgatgcagt aaacatagaa aaaaagaggt ggtccatctc 10140
ctgggcagaa gccagtcagt tgtctacaca ctggaagtgc ctaccatgca tcaggtgtag 10200
agagagacag gagtgaggcc tggcccttgc tcctgaggtt tcagtgtctg tggcactcaa 10260
ggcacctgaa gaagcaatta ggacagtgtt gtaaatgcag cagaagagca gggaggatgg 10320
agtaagtggc tgactgtgta ggatggcccc aaatcctctt tgaaagaaca ggggaggtgt 10380
gtaaaacaca gcacacactc tgcctggggg attttggata aacctttag cagtggcaat 10440
gagctgaatc tgaaaggatg tacaagagtt tgccagatgt aaaatgtcca gaaaggtgtt 10500
ccagaaagag ggaccagcac aagcaagagc tggagcagca cacagacagg tgaaggggt 10560
gcagtgggaa ggcccatgtg actggtgttg ccagtgcccc gggagagggc cagggcacaa 10620
agctgaaggg gatgcttgag cctggtgaca gtgcaccttg gataccgtgg gctggccagt 10680
gagctgactt tcactgagca tcttcagtat tgttctacca ataagaagac caagactcaa 10740
aattttacta acttgcccaa attgtacaag aagcggtggg cccaggatta gcccccaagt 10800
ctctcaggtg gcaaagcctt tgctgtcttt cctgcaccat gctgctgctg agtctgcact 10860
tcactcactg taaaaaggtc tttagacctt gttgtatttt tttaagtggt gaggcccttt 10920
ttgcaaataa tatctgaacc ccaaattcca acatatagaa acagatcagg ttttcactaa 10980
ataattagca ttcatttatt tcatatttaa atgtgtaaca cacaccaatt aatgaaaaca 11040
gtgactttgt ttttaataag ctcatttatt ttggaaatag ctaaactcct tactttattt 11100
ggatttcact agtttttcca tcagtgtttt ctttctgttc cagattctag ttctggccca 11160
agttataatg actttctttt gacaaacact aaatatgaag ttaggaatta taatgcattg 11220
tcagatgctc agctttgtga cttaaagtaa gatactgccg tgaacactta gaagacacac 11280
taactatctg tacaaaaggc attaagccct ggactgatgt cattgcaaca agcatgctgg 11340
gtggctgagc agccagttac caaaatacag ttgatagaac gaactgttaa tgcagcccag 11400
aggagaacac aagaatgcat acccagcaaa cttgatgtag tctgtcttag ctcaggctcc 11460
tatagtaaca tgccatagct taaacaacag agatttattt tctcccagtt ttggaggcca 11520
gaatcccata tcaaggtgct agccaattcg gttcctggtg atggtctctt cttgatttgt 11580
atatggctgt gtcctcacat gggcttttct ctgtgcctac tcatgcagag agagacttgt 11640
gtctctttct tgtcttataa agtcaccagt cgtatttgac cagggcacca ccccgtgtcc 11700
tcatttaacc ttacttacct ctgaaagacc ctgtctctat atacggtcac actgggggtt 11760
agggcttcaa catataactg ccgcgggggg gggggggggg gggcaaaaaa aaaaaaaaaa 11820
aaaaaaaaaa aaaaaagtcc ctaggatagc ccaaaggctg agtaggtgaa atctttatca 11880
ttcaaccacg agatggtatc atcttgaagc tttctccatt ttgtgcacta tttttaaaca 11940
ggtgaagatg tatcatttta taaaacactt gacatataca agaaaatgtt aaatatttgg 12000
attacattct aatgcatcac aaaataagtt agcaaagaaa atatagtatt gtctgaactg 12060
atggtgcaaa agtaatggca agaaaaaaat ttcaaaggta gttgtctgta aaagctgtta 12120
gcgaaggctg gtaggaaaag ttgttaccag agttatcagg tagtcattaa gtttcataca 12180
gatgttaaaa gacatgacat tctttagaaa taccaaacaa ttgccaatta tttgttactg 12240
gtgtgggcca tgagttctag aatttactat tccataccaa agatatttac tgtactaaag 12300
tagagtacag ttgcagatac ttcacgcaga ataagaagcc gctggggttt gttctgtttc 12360
tgcccgtaaa gaaacatagt ttgctgaatg tccctcaatt acagcatggc cacccctttgc 12420
ctatcacttc tcagttacct agcatggggt tacagtgtta tccatgctca acactgcaag 12480
ccaaagtggg ccatagtaag tgtgttgagt aaatggctag tactgctgat gtttttagtt 12540

agagaggtgg ggtggatggt cctgccatta atcaagaaaa atatgggaaa aggaacagat 12600
agtggtagat gggagagagt ttttgaagta atttcaggag atacagatag agatattcat 12660
ttcatctttg gaatagtagg aaaaaaaaca agtaatattt tgggacaact gcaagtcatc 12720
atttgaaagt aagctgaaaa acagttttta attaaagagt atataccgtt gactcagttt 12780
attatggaac agaaagatca ataaggagaa gaaataattt aggcttaaaa aatgggaaaa 12840
tggataacta gttgatcaca atgtttatct aggaaacctg gatgtatgat cctttctgtt 12900
ttatcactct agtgatattt tattgaagta gtctcttaat gttccaacat gtaatttggt 12960
aaattacggt atattcagtt actaaaacat tgattcaaca ataacaatag cttattttac 13020
tttaacaaaa ccctgtccag agtttacact caacccttgg gctcttaagt atatgtataa 13080
ttcaactgga gtgcttatat ccaaaagcac aagtacttct tgagtctgga gcttcaggtt 13140
tagtagataa tacaatgtag ctattttaca ttgcttgcat tgtacttttg tcttccctta 13200
ccagttctcc tcactttccc agctcatatt cctatttgac tctagaggcg catggaaaag 13260
tatacaacag tgtggtcttt ctgcagagtc tttgggaaca gagccacctc catcttcagc 13320
ttgctctgga aaagctgaag ctgttcacca aaactctgcc cactgggctt ctcctaagcg 13380
ggttggagaa aggtgctcat gggcctgtgc tctatttaca ggtggtcccc atgcttccca 13440
ggctgctgtg tgaggagctg tgcagcctca accccatgtc cgacaagctg accttctctg 13500
tgatctggac actgactcca gagggcaagg taacaactta cacgttttct ttctccactt 13560
acctcttttc tgttccatga gtcatgaagc actcaccatg tgcctggcac tggcttgggt 13620
gccatggtgg taagacaagg gaggtatgga gtagccatca tagagaaatg tcagagtccc 13680
tgcctcggaa gagccgttgg ccccacttag aagccaagac tgaccttaag cacttagaac 13740
aggcttcttg tctgttatca ggtgaaggaa gaaattgagt aagcagagtg atgccgggga 13800
ggcttatgca ggagacaggg tgtaagtggg attgaatgag gattggcaaa ggcaggaggg 13860
gcagcccagc ctgcagttag gagagcagag cctgtttaga ggaggacatt aggtaaagtg 13920
ggaagtttac ataggtgggg tgaaatcaaa ctggagaatc acaaatgaat tgtaggtgtt 13980
agggttcctc tgaagtgtca tgagaaagct gattgtagaa aggtcagtgg tgcatcgtca 14040
tgctggatga ttggagcggt gaagatgaat tagcaaggta gtgctataat caaggcacaa 14100
ggtggtgaaa ccacagacca agaacagagg agagaaggat gtcagcaggg gtttctgggc 14160
ataaggaaaa agatgtctgt gcctgtcgtc gggatgtgcc tatgcgtatc atagggaacg 14220
gcaggagaga gatacatgaa agagaaacta gtcccctccc tgcaaatgta acaactccaa 14280
acattcagaa gtagggtcgt gattaagtaa gccctggtgc cttctcagtg gaatatatgc 14340
agttattaaa gttgttgaca gagaccatgg aagaacatgg gaagtgttta tactgtaata 14400
ttaaatggaa gtaaaaaaag atatttaatt ataaagaggt tccaaataaa gatagaggat 14460
caaataccca catttacttt cattccctcc caaaacctca ctaaaacaac agtaaaagga 14520
ttttttttt taaagacata aacccacaag gacaaagaga gtgggagagg agacaacagc 14580
aacaaaattt tggaatctgg gtagcagatg gatgagtgta actgacttag cagtcctgag 14640
aaagctgaat cctgagccag caatagagaa agccaagaaa caacccagtt tatgcagcag 14700
aaccctaaac aattcagaaa ttgacagtac cagataattc tagaaagtgg gggaggggtg 14760
ggggagagtg aggctaacaa cagtattgaa agtttatttt taaaaattgc ccctcctata 14820
acttagtgga agatcagaaa tgtgttctct agacagggta aagtaagagg tgtctgaact 14880
agaggacatc aaacatgctt gatggcagtg acaccttggg ggagattgag tgaatgttgg 14940
catactgaac gttaagagtg tcagctttct ttttgctgcc agccccagaa ttctggtcgc 15000
caggcctata tccatgagtc gggacatggg aaaatctctg aggactctga atagtgagga 15060
ataaaaacat aaagatacta accttaagag tttcccaatc agcagcccag ctgtctttcc 15120
ctacagtaaa gcttacagac aataagcttc acccgcacaa tcagagcttt ttaggatttc 15180
atttccatat atgaagagac aacccgaggg aagcttctaa tgtgaaatag ggaggctatt 15240
actaatgcat tgattcaaca atagctttat tttactttga tgaaaccctg tccagagttt 15300
acacttagcc ctagggctct taagtatatg tgtaattcaa ctggagtaca aacaaaacag 15360
gaaagaagta aacaaacaga aaatgaagta aacaggaaaa agtaactaga acaaaacaca 15420
ctagcaggga aaagaaatta tcacttatat ctttagggaa ttttttaaa aaagaaggta 15480
gctgtatcac aaaatcttga tactttaaaa aggaaacatt tggagggaaa aaaagagctc 15540
ttgggaatta aacacaggtt agaagaatta aagattcaag attcctactg aaaggtaaag 15600
ttgaggagct gtcccaagaa gagacagaaa agacaaaaaa ttagaagact agtccaagat 15660
atacaatatc tgttcaatga ccgttccaga aatagagaac aaagtaaaca gaggaaaaga 15720
aatgatcaac aaaataattt taggaaatgc cccattcctg gaagatgtga ttttccatat 15780
tgaaagggca cactgcctag cacaggggtg gaggcacatc atcaagacac atcattataa 15840
aatttcagaa cactgtggac aaagaaaaaa agacatacga taaaatcgga aatcagaata 15900
acttcagact tttctaccac aaccctagaa attagatgac agtgaagcaa agctttctaa 15960
tttctgaaga actgtgatct ccatgccaaa attctgtacc caacgaagct atcaataaaa 16020
agggtaggaa aggacatttt cagacataca aggcttcaac aaaaatgtcc atctcataca 16080
ccctttctca gaaagccacc agaagatgtg cttcaccaaa atgaaggagg agtaaatgaa 16140
gaaagaggaa gacatgggac gcaggaagca gataatccaa tacaggaaag aagtgaagga 16200
atcacttaga tcagggctgg cagacttttc ctgtaaaggg ccagatagtc agtatccctg 16260
tcacagctac tacactgtcc ttcaggtctg tcttaaagaa gatgctaagt gccaggtgtg 16320

gtggctcatg cctgttatcc tagcactttg gcaggccgag gcaggtagat cgcttgaggt 16380
caggagttca agaccagcct ggccaacatg gtgaaacccc atctctacta aaagtacaaa 16440
aaattagctg ggcctggtgg cgggcaccta taatctcagc cacttgggag gctgaggcag 16500
gagaatcact tgaacccggg aggtggaggt tgcggtgagc tgagatcgtg ccattgcact 16560
ccagcttggg cagtaagagt gaaactccgt ctgaaaaaaa taaaagaaaa agaaaaagaa 16620
gaggacgcta agctggatcc tctcgtgggc ttctacattc tgtctgttag aatcagttgt 16680
tttggttgat gtgtagatat gtagctggaa aagaaaggag cattttaata acttttttcag 16740
ataattgtgg ctattcattt ttgtactaca ccaaacttta atagtttctc aaaagttggt 16800
tgggccaggc acagtggctc acgcctgtag tcccaacact ttgggaggcc gaagcgggca 16860
gattgcttga ccccaggagt tcgagatcag cttgggcaac atattgaaac cctgtctcta 16920
ctaaaaacac aaaaattagc cagatgtggt ggcatgcgcc tgtagtccca gctactcagg 16980
aggttcaggt gggaggatca cctaagcctg ggaagtcaag gctgcagtga gccatgatca 17040
cgccacgcaa tcccagcact ttgggaggct gaggcaagag gattgcacag cctgggcaac 17100
ataatgagac cttgtgtgga tgaaaaaaaa taaaaaacag acaccagaga gtgagctctc 17160
tcatctcccc aaaataccca agtctaaact atagtttgtg tgtcagttgt tccttcaagt 17220
aaaaatggtg ttccataaaa tgagcaatca gttcacttca caactcagtt atgtaattgc 17280
ttttcctcaa gaccaccagc gtacctctac atgcagcaaa agtgaaaaag acaagcaatc 17340
aagggttgag acatcataaa attaataatt tttactcctc tgtccagagc attcggttgt 17400
tcgatacgag tatgaggtat tggagtgcaa tagccacagg tgtgcttgtc ggatttgcac 17460
caaggcagcc actttaccca cgagggcttt tgtgccacca gtgtaaatgt cagcacgtgg 17520
aaaggacaaa cactgcctta gtatttttat gaaaatagtt ttaacctcct ggattcctgg 17580
aagggtctca gggatcccta ggggtacatg gaccatacct tgagaaccaa atggacagtt 17640
ggtggaaagt ttggggtaga ttaatataca tagcacacag aaaaaccaag caaataaaaa 17700
gacagttatt aattccagtg agaataaaaa gttgtataga aaagaaaagt aacacttagt 17760
atttatgtaa tcataatagt agattgataa aatgaattct gatcattgtc atgtattagg 17820
aggattaagg actagaatag ttacgtgggc atggtggggg agggagtgtg tatggaagaa 17880
aaaataaatt atcttctgta gtgaaaagtt tgcaaataat gcctaaaaaa aatcaggaag 17940
tagcagacag gttatataga aagttaatat ccaaatactc ttttaaaaga ggtaaaagta 18000
gttactcttg ggaagtaaca gagagggatg ggggctgctg tttttcataa caatacttta 18060
aaactatttg aactatgtat actttaatat ttttattgtg aaaaatttca aacatacatg 18120
aaagtaaagg gcacaataaa cccatcctcc ccacttccca gattcaacta tcaagacaga 18180
gtgttttaaa acaaaccaca gacatgtcat ttcgctcata catattttag tatgaagctg 18240
aaaaaatttt ggacattttc ttatatacca cagtgccatt agcacaccta acagtgacta 18300
ctaatgcctt ggtgtcattc tgaacccagt ccgtaataga tttccttcct ttctcccata 18360
gattttcctg aattgggatc aaaacaagtt atacacatta tatttggttt ttatggctct 18420
taaatatcgg gttaataaaa aaaaagcacc cttttaaaga ttttttaag agttaagagg 18480
caaacgctat ctgaaaacag aaggaattat gaggacagta tgccagcaat catattttgg 18540
tgggggtggg agcatgcata ggggaaaaaa tgaatggaaa aagaccagta ggaaataaaa 18600
tcgaatgcca atagcggtta tgtttgggta gtaaaactat gagtaatttt ttctactttt 18660
ttgtattttc taatgttttt tgaaaacgtg tagcttttat gtttttataa atgcttattt 18720
tcgtgaaagt ttaactaaac agaaaataaa agcccataga agaaagctaa cttgagtcaa 18780
cagaaaagaa ctttgagtct gaattttgcc tgccaaagtc agacccaaga aataaaaagc 18840
tgcccaatct aatgagcttc taaaatatga gggtcataaa agaagcacta gaaagtggca 18900
aactctgtaa ctcagttggc ctctggggtt tctgttggag gtagtgtctg gtgcccaggc 18960
cactggcatt agggactaga gagcaggtgt gaagtaggca caggatccag gaggggctgt 19020
gggcctcagt gcaaaccaag ccagatcgga agtaatgaga gtttggacta gagacagagt 19080
tgtagggcaa agcccactaa ccacactcct tgtactgttg gttatccaaa caccctgccc 19140
agaccaagcg accacatgag aggtagacct ggttggttag tcctgggatg agtatctctt 19200
acccacaatc aagatgcatg aaatgagagg tcagattcca gactcacatc caagggatgg 19260
tccttcctca agacactggc aaggaaagct tgagtttagc aagggctggg ggaacaaagt 19320
tcggaaccag atgggagggt tagggagcca gagaaggcca acgggcaagg ggtagccctg 19380
catcaagaac ccagtgatga agaggaggat ctccgaagcc tgtgtggcca aagtctgagg 19440
ctggttttgc atgcagtggt gacttctctt ggcgtaaagg tttggactta gaaggagtca 19500
gagcagggcc aacagcatca tgccacagct gctgcgtagc caccagtctc acctggagtt 19560
gaagtggaga aagctctgta tttttcctta gtctattgga atggcttact ttctggagca 19620
ggcatggtca gctatagaaa gattgttcca acgttttctt aacgcctact aaatttttt 19680
ttaaacactc acaagaaaat cttggacatg tatgcattca ttaagctagt gctcaggctt 19740
ttaggtcaat aaacgctgaa taatttattt ttagcatatt tctcacatgt tggttgtgag 19800
agtcttattc tctgacttag taactaagtc cttagacctt agaaccttag aatcttaggg 19860
ccaaagatca gaataataaa agaagggtct cacaattgat tagctatcct cagtttgcgt 19920
ctcctgtgac atccctgctg tgtgctgtac aggattagtc aggacctgga gtgtactatg 19980
gaagtcgcct atttcagcca tttacttagg tcaaaaacca cggggtcatt cttgactttg 20040
gtctttctct catgctacat ctgcatccag tctgccagtg tgtcatcgct gctttgcttt 20100

ctgaatgcct ccagaatcag cccccttcct taactaccgg cactaatacc tgcgtccaag 20160
ctattctctc tcaccttgac agatacagtg gcctcctgac tgtccttgca gcctctgctc 20220
ttgccccacg tcatctcctc tgcatacagc tgtcagagtg atccttctga atcttaagcc 20280
ttgtctctcc attaaaactt tccaatctct cattcacaat aaaagataaa acgccccctt 20340
acaatggtaa ctttttcctt gttcttttct gcctgtcttc tgtgctggaa atgcatagac 20400
tccagagtct tcctgcaacc agcatctcct ctcatgtcct ggagcattgc tgctcacagg 20460
agagaagctg ccttttatgt gtaactgagc tctctgctgt gctgcaggcc ccctccccag 20520
ctccagggac ctgacatcag tcaaggttga gtttccccac ctgccatctt ctcatatcct 20580
tcaagcctct gccccttcct tgtagctgag cagatctttt cctccctgct taactcattc 20640
cattctgaga attggacatt gtagaactat gttgtgtacc agttggggct ttctcagctg 20700
aaccttcagt gctacttggg aatcctttta ttcgtcacta ggttccaagc ctttttctt 20760
cggttccaac ctcaaccttg ctttccactc ctctttcctt taagacccat cattctccca 20820
agtacctttc attcctcctt cttggaaacg agagaggcta gccaacttca actgctgagg 20880
tccccctttc cacatcaaaa tttctctctg ccttgccgct acttaggagg ctgaggcagg 20940
aggatcactt gatcagattg agaacagatc gagaccctgt ttctaaaata taaatgaatg 21000
aataaataaa taaatatttg gctgggcatg gtggctcata cctttaatct cagcactttg 21060
ggaggctgag gtgggcagat cacctgaggt caggagttca agaccagctt ggccaacatg 21120
gtgaaaccct gtctctacta aaaatacaaa aattagccag gcatggtggt gggcacctgt 21180
agtcccagct acttgggagg ctgaggcagg agaattgctt gaacccagga ggcagaagtt 21240
gcagtgagcc acctgtgaag agaaagcgag cattctgctg ggtgtataag tggattgtgt 21300
gcaatggtgc ttcagtctag atattcatgc cttaatctta ctgtgttcgt ctctcccttt 21360
ttcaggggaa gcctgagctt tgcttagtga tgatggccct agtgtgagga ctggggcttg 21420
tggagtagcc tcttgtttgc tctagccacc ccactgcctc tgtcctctgc agttactagg 21480
accttcccta gcaagtttgc gtcctttcca ccacaggcat gacctgcctc tctctgctct 21540
cttccagccc gtcctctctc tgcctagtcc ttttcagaca cttgcttctt ggcacctttg 21600
acttttctca ctgccgggct gcccctacta aggatgattg ccctgttttc gtagctctaa 21660
gaagcagcca aaatccactc cacctccctc ccaccctccg tcactccaaa cagcctggtt 21720
ttgttccagt caggaaaagg tttctttctt cctcatattt ttttgaacaa aatattttgc 21780
atacggaagc ccggagctcc tgcaaaagtg attttgtacc taattattta agattataag 21840
ttaaccccac ttgcagtttt ttcagccaga gatacatctt aatgaagtgc tgacattttt 21900
cagaggataa atttaaagat acatttgaat ggaactgaat aattttcaaa ggaagtggtc 21960
atacttctgt atcaatatag aaagttgatg tgtgtttgag acatacttgg tttattttac 22020
ttcatcatct gcctctgtct aatttatgac cttcacctga aatggaataa aagtaacact 22080
agattttggg tctgtcttta actggatctg gtcttggccg ccacttagga gtttgtatga 22140
cttttgacaa gttcctggcc tgttttctca actgtaaaat gggctgaaca atgcactcct 22200
cccagatgtg ttaaggagat tttagaagta gtaggtttaa gaatactccg agtgttagac 22260
tacttccggt cttacttagt acagtaggta ggccttgaat tacagtgctg tagtacataa 22320
ttatgtactc ctttttcagt agtttttttcc cagtaatacg ccttcagtca gtgttggcac 22380
tgtatttaat ttgacattct gaacagtggt attccagagt atgtgcagta aactcacctg 22440
cctacagaag agtgacccaa atcctgtgat taagaaagaa aagaggggcc aggtgtggtg 22500
gctcatgcct gtaatcccag cactttggga ggccaaagcg ggcggatcac gaggtctgga 22560
gttagagacc atcctggcca acatggtgaa accccgtctc tactaaaaat acagaaaatg 22620
agccgggcat ggtggcatgt gcctgtagtc ccagctactc aggaggctaa ggcaggagaa 22680
tcacttggac ccgggaggcg gaggttgcag tgagcccaga tcgtgccact gcactccaac 22740
ctggtgacag agtgacagag tgacagagcg agactctgtc tcaaaaaaaa aaaaaaaaaa 22800
aaaaggaaag aggaaagaca tgatcttctt tatgaagtgt tttgtttctg aagctctccc 22860
tgctgtttct acttttccg tgaaaaactc tgtccttttg tcttctgcca ctggctttgg 22920
ttatgcactg ggcattgatg tgaatccagt ttccaaattg gaaagtaatg aggtgttcca 22980
tacagagagg cctgccttac atactgtgag gttggctatt ccgaggaccc cctccatttg 23040
gatctttgct ttcttgctgc ctttctctgt gtcagacgac aacagactcc tttcttttct 23100
gcttggcgtc tgcagaagat ggtttcaggc cttctttccc tggcctagtc atttttagt 23160
acatgtcagg tgtgactccc agaagcactg gactgtgtta aggcatagta gattcggctg 23220
ccagaggtcc ctgtgcctga gcaggaagtt cctgatggct cttcaagctt ctacctcagc 23280
ccttcgtgta tttaaagaga aggttgggat ggattttcag ggttgcaggc gttaaggaag 23340
acgactgaag tgaagcaaaa cagctatggg aaagtgatca tcagcactgc agtctccaat 23400
ttggtggtgt tcctatgtgc tgttaggaag ggacatctta tctatcttga ctgataagga 23460
aacaaagtag aggtgcccat taaggaaaaa aaaaaaggag ctcaaatgaa ctggtagcca 23520
atgccagcat aggcggtgag caggctttgg taaagagtga caagctgctg ctttgggcaa 23580
gtctcaggta atcaatttta ggaatacctt aggattccaa gtggctcctg gtcagggcca 23640
gcaatcagag gggtgagaag gagctacaga gatgtgctta gagccaggag acgtgggcct 23700
gcagggtaca ggggtgtctg ggaacctcgt ggaacttgct gctacgtttt atgcataaat 23760
atttcaggga ggagggcctg gagcattcac taagtttttt tctgtttgtt ttgttttttt 23820
gagaccgagt ctcactgtgt cgcccaagct ggagtgcagt ggcgcaactt cggctcgctg 23880

caaccaacac ctcccagact caagcaattc tcatgcctca cctttctgag tagttgggat 23940
tacaggtgcg cactaccatg cccggctaat ttttgttttt gtttttgttt ttttgtggaa 24000
acggggttcc attgtgttgg ccaggccagg atgccaaact cctgacatca agcagtccac 24060
ccgccttgac ttcccaaagt gctgggattg caggcatgag ccaccgtgct tggccaaaat 24120
tcactagatt ttgaaagcag ttcttgaccc atggcttatg tgaaagcaaa tgcccgatca 24180
gggtgcagtg gttgccctgt gctggagcat tcactaggga aaaagaccgc agaccctggg 24240
aggctgcaga ccctgtgacc tgaatgctgg atgctggagg gaacctccag accacttgtg 24300
aaatgtgaaa gagaacagtg gaatagaact gaaactgacg ttccctgagc atgctgaagg 24360
cagactgtac agcccaatgt agacgcacag gaggagtgac tgggtttgga atgaaatgta 24420
gaaaaggaag caagctaaat caccagggga aacccttgag accacaagaa tgaagaggtc 24480
atggccctgt cattccagag gaggctggag cagctcttca ggaaatgtgg atgtgcgaag 24540
aggacaagcc tggctgagcc taaaaggggc tcttcagact cttctggaga cctgcacatg 24600
gcactcccca ctgggactgt caggtggtac ctggaattga ctctacagtt gcttttgccc 24660
acagcacaca catgcttcct gagagccaaa ttcagacctg cttgccacag tggaagattt 24720
gtgagattat ttgaatccct tatatctttg gatagtggta gttcttggaa taatatggaa 24780
agaatagttt caggattttt ttaaaagaaa agttaaagtc agtgattaca gattcaagat 24840
tcttataaga ctttgctctg gataaaaatg tgagtagttg ccaccattct tttcctctac 24900
cccatggctg ccatttttca agagtattga ttcttccttt aagggagggt gaaggtacca 24960
aagtggtctc tccagccttt cagggcagaa gctgtattcc ctggaggctt tgtggtgtga 25020
acagcacctg ggctgggctc agtccttccc catggggaat gcctacatac tcttcaactg 25080
gctttttcgg aaagcattgt ctgagagctt gtgaacagaa gggttggctg gtgaagagca 25140
aggcaagggg gatgtctgca agcccaggtt aaaaggtaaa atgttctact cttgactggt 25200
gctccctccc ttttcttgca cagaaaatac acttccacgc atttatccag agcttttcca 25260
ttctcctcag gccctcaaac tccacctagc ctcctttgta ctttgcctca tgctcaacta 25320
catagattgg ggttctgtga tagtcatgct ctcagcttcc ctcttcttcc cttcagggtc 25380
tcctgccctt tccttccttc cttcctcccc accaggctgg gcttcctctg tccaggatgg 25440
atggcctcca tttggcccaa gatccctttt gttctcttgt gtcttcagtc ttccttcagt 25500
gctggtttct cttctttacc ctacaactgc cacacagccc tctgttctgc tcattccaaa 25560
gcgctccttc cctcctgttc ttttggaagt ggtcatccac actggttgca ttgcctccgc 25620
ttccgatgcc cccacctatc cttaacctgg tgcttcccag gttttttcat gtcatgtcac 25680
acacagaaga tgttgctgtt tgagtagcac cggggacgtg tgcatgaggc tgatgggagg 25740
ccgaagctct ggctgccctg ggagtaagaa gagctagagc cctcctcaca gcgtctccag 25800
aacccatttg cagtacatgc cttaaacctt tgcagtgtga ctctgcccct gtcctatatt 25860
ttcctaaaat agccttcata aacaccacca gccagcaaat gctcaatgcc aggagcttgt 25920
ctttgttttc tcctccttga catccaagtg gcattggaca tacacttgcg gtttagagag 25980
actctagggc tggactgcct gggttcagtt cccagctttg ccagtctcta gcagtgtaac 26040
cttgggcaaa ttccttaatt tctctatgtc ttagtttcct caactgaaga agaggatagc 26100
aaaattccta cctcatagca ttgttatgag aattaaatag ttgccatatg gagagtgtga 26160
acaatgcctg tctcatagca attgctctct gagtgccctg tgttgtcttt gagtcccctt 26220
tcttaaagct cttttctcct gcttttccta acatcggtca ctcctggttt ttgtcctgtc 26280
tctctcagct ctcttgtttt ttctactgtt ttcattccct ggcttctctt ctctccttaa 26340
catgaaggag gtgttaggcc aagcagcccc acctcccccа accgcccttt cttccataga 26400
cccttccacc tccaaacggc ccaggcccac atccgaatgc ctgccagatc ccctcaccta 26460
catctctccc tgaacctcag acctaggagt ccccaaaatg ttttaatgtc ctttttttgt 26520
tttaaaagta atacatattt attatacaaa atacagaaaa gtgaaaataa taaaatgcac 26580
ctcagtggta atcccaccgc tcggctggca ccaccactaa acttgggtat atctccttca 26640
agcccagtgg ttctcagcct gggccagctt tcccctagaa gacatttggc catgtctgga 26700
gacatttttg attatcaact tggtagggag aggtgctcct gacatccagt ggatagaggc 26760
cagggatact gctgaacatt ttataatata cagttcagcc ccctggccaa caaggaatta 26820
ttcagcccaa cagtgccaag attgagaagc ctgttctaga cttctgtctc tacatatgtg 26880
ccccaaatgg aaaagtcgga atgggtttcc tctttctagc ctcatcttgc ttctccacct 26940
gtgttcactc tttttgtcag tggccccacc tcccccttct ccctcactcc acatccgagc 27000
tgttcccaag cctgcagagt ccctgtctgc cacattgttg gcagctctct cctctactac 27060
tctcagtgtc gacattgatg cccactcacc gaaactaatg aaaaagcctc cagcatgcct 27120
tgcctgtgcc actggtgtgc ttggggaccg tccataggtg tccagtgccc attggattaa 27180
ttccacgcca ggtggagact aagctccctg agggcagcag cttccatctc tgattcatct 27240
gggtgcctag cctgaacctg ccaccattcc gagcacacag tcagtgctca ataaatcttt 27300
gttgaatgtg tatggatgaa tggctgaagg aagaaaaacc tgaaaaacat ttgtcctcac 27360
aattcccttg taatctgtcc atctttgcag atccttgatg aatggtttgg ccggaccatc 27420
atccgctcct gcaccaaact tagctacgag catgcacaga gcatgattga aagcccaact 27480
gagaaaatcc ctgcgaaaga gctgcccccc atttccccag agcatagcag cgaggaggta 27540
caccaggccg tcttgaatct ccacggaatt gccaagcagt tacgccagca gcgctttgtg 27600
gacggcgcac ttcgtttgga tcaggtcagt acgtgttttt ttagtgtagc caacagattt 27660

gactcgtgcc tgaacccagc gtggatgagc gcagcttggc aggcttagac tcttccttcc 27720
ttctctttgc tccaggcacc acactaaaat catgttctct gaggccggca ggaactaact 27780
cccattcact ctccaaatac aggatattat gcaaaatatt ctgtattttg tatgattcca 27840
caggtacacg aggcctaatg acatgagcca aggcaaagag tgggtctgtg tgggtggctc 27900
tgaccaaaac ccccagctgg tcttccctgg taaggctgtg tccagtctgt gatcctcacc 27960
tcaggtctct actcaaacct gttctttaat ggaggcaaga ataggagaca cggaaattta 28020
ggaggcagct gaccagtatc tgatacgaag gcttggaaaa aaagtatttc ttcttatacc 28080
tcatctccca aaaaagagtt atttgtttac aaattccaga ttaatatctg aagatgcaga 28140
gaactgagga gactgtagaa cagcggtccc attgttttgg gcaccagggc ccagtttcgt 28200
ggaagacaat ttttccacag accaggggta ggggatggtt tcgggatgaa acttccactt 28260
cagatcatca ggcattagtt agattctcat aaggaacatg tagcctagat cccttggatg 28320
cacagttcac aatcgagttt gagctcctat gagaatctaa tgctgccact gacctgacag 28380
gaggcagagc tcaggtggtc atactcactc actgctcacc tcctgctgtg cggcctggtt 28440
cctaacaggt catggaccag tatggcccat ggcccggcag ttagggaccc ctgctgtaga 28500
acactggcta ttgaataaca ttggcctgga ttgttattga taactctgaa gtctcacagc 28560
cttgctggca gccctctggg acttaggtag ctgtcactta aacctgcttg aatttccata 28620
tctgagagtc ggtaactgtt aggacccagg atttcttttt tcattgcttg tcagtatatt 28680
acagaggaga gactatgttt tgtattatgg acttttttc tccttcattt atatttctca 28740
cccaaacact ccttccttgc ttgttgtgtg ctctgggaag tttccacgtg tctgaaatga 28800
ggtgggtagg agcgtggaac tgttcaccag accgcctcat gcagacttct ttccctgagc 28860
ctgtcagctg ggagaaatct gaaaggcctt gcaaagcctt ctgattgaag ttctgatttt 28920
atcctccctt ttgcaacaga cttgcacaaa tgcttctaag caggcattgc aaataggtgc 28980
tgccctgggc ctagggagaa gtggctgcca ttgggaccag tggatgacct gtcctgcctg 29040
tgtgtggcag agtcagggta gcctctggag ttctcctgct cctccttccc cagcctgggc 29100
tcgggcagcc tgagcaggcc tgtctgcgtg agaatgctga cagggagaca agaggcagag 29160
cggatgctga agaagacagc agacatggtg gaagagaaac taaaggcata ggggattaca 29220
gaatacctac tttccttcct ttaagaaatc attcatggga gtgtgaacac actctgtttc 29280
tcatttacag gtggctgcct gattgtcaag tcccaggaca ctttacagtt cttgcttctt 29340
agacttctga cctgcaccag ccccctttgaa acccacctcc tggttctctg tttctctttg 29400
tacatctcca gtaatgtcct gctggccccc tttgcagaag cctcttctgt ccaccacttt 29460
agggttggca ttccctggga tctacccaac ctttgttctt tctgtatcca tactcccacc 29520
ctgagtgacc tcttgtgatt ctaactacta actggatgct aacgagccaa aatctgtctc 29580
tctatccctg gcctccctcc cccagctcta gtccagcccc acaatatctc agccagtgct 29640
catccttccc tctgtaaaac gcagtgatca gtgatgcagt aggtggcacc ggctgtctag 29700
tactgccttc tcccttggcc cccaccaggg gagtggtatg tgtattctca aacctggcta 29760
ggccagttgt acttgttgta attatgcagt ttaactaaat atcagggaaa ccgatcaaat 29820
acgaacataa aaaagaagct gttgttttta taaaaactaa gttaaatgtt ttggaaagac 29880
ctggataagg ataagtcttt aaaaattcag ttgtaaaaca ggggataatt acaaaatcca 29940
ttaagcattc tgtattcaaa ttgcttcata aatgtctaaa ttctcattct ttttaaagaa 30000
atcaaatggt aacgtatgaa cagtgaattg tgagtgtagt ttattcagaa aagactatgt 30060
agaattccgg ttagcattcc ctttttgaaa gccttacatt tacaaaaaat tagtgaatga 30120
atatacatct atataaatta aaacatttag tgatgggttt gtcttcctct gtttgattct 30180
cttctttttc taacttctag aataaccaac caatggctgc tgaagcacat cacaggaaag 30240
tttctgtcat aacgttttag agactttacc ccaccagttt gttgcaaagt tcagttgaat 30300
taagtatatg aaatactgta aaaactgtag aagactgtca ggtgatccca gctcatatga 30360
ggatagggta tagttgtcaa aatagaagaa tgatctcaga ttattgatag ataaagatct 30420
gttggcatgt ctcagaatca gagtcttatt gctgaaaatg gctttggata tctgtctcta 30480
ttggccttct caatttatca gttagagagc tgaagcccct aaaggttaag tgagttgctt 30540
atatgcaaga aattcaaatt gccctgtgtt cactttgcct tcatttacac catgctgact 30600
tgagagagaa aaacattttc cttttaagtg gaaagaaaac cctccgaagt cctaattagg 30660
ttccagttaa ttaaggtttg aaaataaggg ctttgcaccc ttggagttga ttccttggtt 30720
cccccgaaaa caagtccatg gaccccagct ttggaaggag gagcacatca atctcccaca 30780
gcaaaggact ctggtgaggt catttataaa tcagctaaat ggccctattc agaagtcact 30840
gcatttgttc tcctgccccc actgcctgcc ttgtcctcac aaaaatccat ttttccttgg 30900
tgctttttttg agtagcctac tgtttggaat tgttctctga tgctttgttt gcctcagacc 30960
actatgtccg tgcttttggt ggcagtcctt taaaaaataa aaaataaagt ccatttaagc 31020
tagcctcaat tagagatgag tctgtgcgag ggggtaccat ttatttacac atcatgccct 31080
taggttcaga ataagcgtgt aaaccacaag tttcaccttt ccaagaagtc agtttaccat 31140
gatgactttc cgaatgaatg ggggctgagt gtgcggcact agtatggtga ttgtttgttg 31200
agttagggac ctactagttc agaagtcata gcctcagaac tgtagagcaa cttgaccatt 31260
gtgtatttgc agttggcaac ttagaccgga gctgcctaac ccatgtctga gttagtgagc 31320
ctcagccctc agggccacct agtctggccc cagttccatg aaggccacct actagcagtc 31380
ttgtttaccc tagtgtgctg tcatatatta gcatatgtat atactagttc atatcctaga 31440

actgtggtgg gaaacagata gggaagcact gccttccagg tgggattacc tgctccaaat 31500
gtctccttta cctacagttc aacctagttc taaagaggtt ctaggtacat gaatgactcc 31560
tttgtttcat tgcttagaaa gcaaatgcag ataccaaatg cattcttgtg ctttttggtt 31620
ggatgggttg agtaataccc cttccaggta gtttcttcta tctccatgtt ttctgctgct 31680
aagttaattc ttggacttaa catagatgtt tgttttattt tatttataac atatgtctct 31740
catttctgaa aagggagctc ccataacagg ggcccagact tttttatgtt tgtagtaaaa 31800
ggaatcataa tgctttataa tcatatccaa atcttgagct ttgggagaag gggaactgtg 31860
ggaagtttgc tctctgcctg gttcttgctc agtgattcag gcccaactaa tagactttga 31920
gagtaggggt cacagagtcc cctggcactt ctgcttcttg ggacacgaag cctgttctca 31980
ggcaccttcc cacttaggtc ctttacagag actgcctgac tataatgtga agacaaggcc 32040
tcaggcttct tagccatggc attcagaaaa gataccaagg gagggtggca ggtgccagaa 32100
gaatcccatt atgaaagtgt cttgggaata ttgattgatt tttaggaagc tacacctact 32160
gcctgctggg gttctctctc tagcctcttc ctcatcagtc aggtggcagt acccagaagc 32220
cactctgttt gagggcttcc atgtaaaata agcatgaggt ttgcaggaag ctgtgcacca 32280
tcatgggtcc cctgacaggt ggttaggtga tgtgagcagt tccttctggg tcactgactt 32340
tgggaattca gaggaagttg aagtagtggt ggagaaaacc tgatgttacc atcttcccag 32400
gcaaattact ctcaactcca ggagcttcac aactgcatct tgtataaatc ctacttggtg 32460
caattttgaa acccaaactg caggcagttt ctttgagtgg acttgattgt aaagatagcc 32520
ttgttaatgg aaattatttt taaataccct gggacccaag ctgcagtgga atgctgttat 32580
gtatgacctt gacctgttcc agcctttaag gcagggattg acggatattt tctgtaaagg 32640
accagatagt aaatggttta ggctttgtgg gctgtgcagt ctctgtctct gctactcaac 32700
tctgctgttg tagtgtgaaa acaccagcgt tgctttaaat ggataaatgt ggctgtgttt 32760
caacaaaact ttaagaacac tgagatttga attttatata gttttcacac atcacaaaat 32820
attgttcttc ctttgattat ttttcagcca tttaaaaatg cataaaccag tcttagctca 32880
tgggtcatac aaaagcaggt ttggcctgtg gtccatactt tgctgacctc tgcttaaaca 32940
gccagctagc aattcagccc tgctatccag tgagctttta gcagctcatc atcacttcac 33000
agggaagcca ggctgggtaa tggagaacag tcgtgctaag ttaactctca ggatggcttc 33060
atgcaattag gtaaattatt cctttgatta gtaccatgct tatccagtcc aatgggaggt 33120
ggggagtaga ggaatgaatc agtttagcat cagttccctt attccattta caggcaggtc 33180
gctttaatta gcctgaagca aaaggagcag gggttctcat ttcccacttc tgcaagctca 33240
gcagctcttc acagtcaggt cttcatccca cccaagccca cttgcagaga tgctggctct 33300
gcctcgtgta ggtgcgctga aggtggggac tgctcatggc aaaatgtagc gctaaggaaa 33360
ctgtgtagca tttctccccc acactgcccc cattgccaaa tgtagctgta tgttttgttg 33420
aatctgtttc tgttccttct ctccaataca gtcgctttca agaaatgagc attccagctc 33480
tgctgtttaa tatttgtacc atatatttga tccaaggtag gaaggatggg tacatttatc 33540
ctgtctggct cttccttggt cttattattt atgttgtcac ttaaacacac gaggaagcta 33600
ttgatcacag ggttgagtat atttgtagaa tcattctgtt ttcttagtcg tagagctttt 33660
ctataaataa tataggaaaa taatgagaga gccagcaggc cacacagaaa atgtaaagtg 33720
atgtgacaga actctgccca tagtgcagtg agctgtcttg gagaggacca gctcagtctc 33780
aggggttcag ggaagatttt ccagcagaag tagtggggca ttaggccttc taaaagactt 33840
gagggtctag ccaggctgca aaggcaagca gactgctggt acaagcatgg gagggatgag 33900
aaatggcaga ttgttccagg gtgtgtggtg tagggtgcag agagagagag gagctagagg 33960
agacacaggc taggccttgg agtctgtagg aatgaaccag ggcagctatg gaatgatttt 34020
aaatatgtaa gtgacatgag cagaactggg ttttagaaag agcctcccaa aagtgaatag 34080
aatagaggaa gtttataatc caagagagaa atgatgaggg cctaacctga ggtagggacc 34140
gtggggtgag agaagatgat ggaccgaccc aagagaggga agaaaatcga caagcctgta 34200
gcaaattgac tctcttgatt agatgcggag gggaggggca ggatcagagg ctagggatca 34260
gggaatcagg tttccagttt aggcacatgg tagtaccacc tggggacacc accgtggtgg 34320
aggtcgagaa gagagatgat gatttccata actaggcctc tccggtcccc tcttcttcct 34380
ttaggaagga agctttatca taaaagtaat atgttctcat gttagaaaat ttagaaaata 34440
caagaatata aagaaaaaat cataatcacc tatagtccca tcacccagaa ataaccatgg 34500
ttaatatttt ggtataattc cttgtgcatt tgccccttat cacttcatag caggagggaa 34560
gggtgtctag cataacatat gtatagtttt tatttatatt ctgctcttaa atattaccta 34620
atgagttttt cctatgtcat taaaaaatct tctaaaacat tataatacct acataatatt 34680
ctgtcatatg aatatactct taaacattca gccactcccc aattttgaat atttaaatta 34740
gattctgatt tttttggtac tacaaataat agtaccatgg ccatggccat ctgtgttcgt 34800
aaatctttga cctgatctct gattattttc ttaggacagt cttagaactg tgatgacagc 34860
atcaaggata tggatatatt taagattaat actgaaacat attgccacat tcccttccag 34920
agaggttgta ccaatttata ctccttcagt agtatgtgaa tcagggtacc ttagatggaa 34980
acatctgtca ggagttctct gcctacacgg agctctggcg cactcgcgcg ctctcttttt 35040
ctcgtctctc tctctctctc tctctctctc tctgtctctc tctctctctc tctgtttgtg 35100
gtcttagatt atttctttat ctctcatatt ttattttcat gagctcctct ttacaaagag 35160
ctcaatgtgt cacagacact tttaaaaaaa aaaaaaaaat gaatatataa ataagagtct 35220

gagtttttgg ggacaacaaa taatagtacc atggccaggc catctgtgtt cgtaaatctt 35280
tgacacgata tctgagtatt ttcttaggac agtctcagaa ctgtgaggac agcgtcaagg 35340
atatggatat atataagatt aatactgaaa cacatagcca cactccctc cagagagggt 35400
gtaccaatat atactccctc agtagtatgt gaatcagggc acacaagatg gaaacatatg 35460
tcaggagttc tctgcgcaca cagagctctg gcgcactcgc gcgcgctctc tatctcgtct 35520
ctctctctct ctctctctct ctctctctct ctctctctct ctctctctct ctctctgtct 35580
cgtctctctc tctctctctc tgtctctctc aggtgtctag gtctctgaaa tatcccagtg 35640
gttgtggtct tagattattc cttcatcttt catattttat tttcatgagc tcctctctac 35700
aaagagctca atgtgtcaca gacacttctc gttgtgttac ttattttaaa aagtacttac 35760
aagggtccta aaatttaaaa cagctgaaag aggtggttga cagtatcttg ctaaactctt 35820
gctaatgctg agactgggga atgacccctg ccccaagtta aggtcctttc ctctcattag 35880
aatccttaaa gaaacccatt gtgtttgaag tggggctgag aactgttgtt gcattctcag 35940
atcctcagag aacatttgta acttcactag tcttttctct tacctcctgc gtgtattacc 36000
tcttgggcat tgtttgagtt ggtctgacat gaataattat aaggaaatcc agttgaaaac 36060
agaatcgctc tgtataatct gtgctcccat aagaattgct acacttctct tgaaagtagt 36120
agtaaacagt acaggaaggc ttctgctaga agttcaaggc ttccatttaa acattgacga 36180
cttactactt caaccgtgga gatagttcta gagtcagcga ggcttgaaga atattagcct 36240
cctacatttt cccagttacc aattttataa taatattagc aaaattttca tttaaattta 36300
ttcatctcat ttataaagta aatccacagc caagaatgtg tgccctctta gctgttcagc 36360
actcaggcta tctaggacag cctccgtgga agagagtggg aggaggaagc agtgaggggt 36420
ggaacaagct gcatccctga gctttgggga gaacctggga gcgtgaattt cagccgtcgc 36480
gggtgttgga atctcccctt tgagaaaaag gaagagacag agattgattt agttagtaca 36540
ctttatggaa tcaaggaaag caatccatgg ttatgcatcc caaggcatga acaatagaca 36600
aacttgaaaa cttgacctaa ttatatataa gcaacactaa ttacagccac ttatgtgtgg 36660
tggccactat ttctggcttg ttcacgagtg cataaaaact aatatgtgtc attaagcatc 36720
agattcattc tgttgagtgg ctcattatta taaccctgaa ctcttcatgt gcttactctc 36780
cttgtaggca agtcacctag tcatttactc atcattttca aaaattagaa ggaatacagg 36840
ttgcattatt ctggaagttg ttaaaaatac agactcagag gtgatatccg accagtacag 36900
gagggttgct tcctgtgtgt tacaaatact gctcacagtt ctgtgaagga gccttaggca 36960
gcagaagaca aactttctac cctcaagctg cttcagcaat ttgagaactg tatgtacttt 37020
aaaaaacacc aataagataa aagcaagggc acagtctctt gaaacagggc tgacagaatc 37080
gcaaacccga tggttatttg gtgggatggg attagggaaa gaaggccagt ttggagggtg 37140
aagccgtgag ccacactgtg atgaaaggga aaaggagctg aaaggtatgg agtacccacg 37200
ctgtgagagg taagggattt atcccctcac tcctctctct gagtgctgaa cccactgaga 37260
aatagtcatg catatcagac tgagattatt ccatctatta ctgataccgt ttgggttaga 37320
aggcaatcta acagaacagc ccagaagtag ttaatgtaaa aagaaactga ttggagtgat 37380
tagtgagagc agaaagtagc cagagacaga gagaaccatg tcctctatca gactggaact 37440
ggggatggcc cttgtgcgac cttctctgct aggtgccctt ccagtgcagg gtctgctggt 37500
gaggaccagt ggctaatgct tctgctcttg gtcagaacag ccagtgcaga tcctcagaag 37560
aactctgaaa gcaaaattga ctcccacccc acttctagaa gcatttcact tgccttctgg 37620
ttctttctgc ttgcctatat ccaggctcat ttcttataga tgaagaaagt cctaccccca 37680
gcctactcct ccaccttcac cctgtgacct tctccacctt caccctgtga ccttctaggt 37740
tcacctttg aagctgaaga ttgaaactcc aaatcctgct gcagagaagt tcacatttgt 37800
ttttcctagg cagggccagc ccatccaccc ctccttccta gggtttccct gatactttat 37860
ttatacctgt tacctgtctt tatcacactg tcacattgtc ttgccatttt ccttttgctt 37920
ccctgtctcc ttttctaaga ttgtgagttt cttaagggta aagacaacat cttgtccacc 37980
tttgtatccc cagcccctgc ccagtgctca tttttaacca ggcatttcaa ggtctttaaa 38040
catcactata catattgatc ttttaaaaaa gatgatggta gctgtgttca ggagagtgga 38100
ttgtagctct agaagagagg cgtgtttata taagaggatt agatacatat tatgagccag 38160
ggcggttttc tttccttgtg aatgaaaggg ctgggtgttt gattatttgc tggggcatcc 38220
agggtttaga acaaggtata atgaggactt tctcaaggtg gagttgcctg aacaggtgtg 38280
aggagccagg aaacttcggc acccccaggg cctggcagtg cttctgaggc atcctgagca 38340
cttcggtgct cacttctcag accaactgtg tcccccttcag gggagcatgg tggaaggggc 38400
actccagggg aagggaaaga gaccccagtg tgccatgctg ggaagggaga tgctggcctg 38460
ctggcatgga aaggtaggga ggcaccaaac ttcagaaggt tctctagggt cagctaccat 38520
tagctgttag tccctagacc catgatgggg atgaaagcga tttgtgtatc aaggtggctg 38580
tgcagtctaa tgctccttct gcaaaattct gatcagaacc tatttttgct tttaatggag 38640
ataattccca taagacagag gttctgtgtt agctgctgct ggactgtcta agagaggaag 38700
ataacttata tcccggttga agttgaaagt gtgcccagat gactcaaacc taagtgcctc 38760
gcatctccag gggacatgaa gtgagacata gggttcctgc actgaccagg tgataggaac 38820
ttccaggggt gagcagaacc ccagccagca ccccttgttc ctctcagaga tgtgaacctt 38880
tcaagttagg ggccttgaca aatggaacag aatttggctc ctctaggacc ctggcttttg 38940
ggtaattata ctcataatta ggcagcactt ggactctcct ctttctgttc acgggacaca 39000

ctgcacgtcc ttgccctgcc tccatgtcac actccacgtc actcatatgt gagccaaaca 39060
gctacatcag agacgtggaa ttctttgacg ttagtaaaac ctgcattagg gaaggggaac 39120
ccttgcagct gacccttaga tttaaaccat gactgcttct tgggacaggc ccagtttatt 39180
tcggttttca ttgttcagtg agctggggct ctgctgcgaa ggccagaatc cttttgttct 39240
gtttgctctc tgtcctaaag gctgctgcca gactgagttt ccccaaatgc tgctttcccc 39300
ttgccactca agagcctgca gtcttattaa gtaaatatca tggatcagta agatttccaa 39360
aactgttttg aagacaagat ataataagat tgttgccttt ttactttacc aagcaaggac 39420
attttcttta aaaagccagt taccatctac tatcttcatt attttataaa tgaaaacatt 39480
ttagcatgaa aacaaagacg acataatttc acaatatgga gcagtctttt acgttgactt 39540
ggttgaactt ggtggaaacc tatttaattg tcctatcttt ttctcatttt gtttgatctc 39600
aaaccagcct gtgagaacga ctggatttct acatcaaatc taagtgcccc agcctttggg 39660
ggcctctgtc aggtagcctg gtgtgggtgt tccctgcttc ccactaaccc ctatccttcc 39720
tcctccctcc tgccttgcct ctgtagagtc tgggcctcca tttgatcccc gcaaccctac 39780
acacctcact ccctctagaa gcctgctcca aatagacttc ctcttcctcc aatatctctg 39840
gccccattcc ccatctctcc cctaggtgcc tggtgcggaa caccatcagc tttcattcgt 39900
tttgttttgc ggttttcttt ctttactcct ttttattttc ctccctgcct gcattcttga 39960
ctataactgt taagaaggca gatgtcttac tgttgcttcc ttcagatttg taaatctagc 40020
atggtgctgg gcacagaaga ggtatgcagt cctttagtgg ggcatcactc ggctagctca 40080
gagctgttca cagtgatctg atgtcacctc tgaggtccat gggtgcccag ggacactgtg 40140
cccattgtat tgtctacaag gtgaaaatgt ggtactgctc ttcctcaaga aactcccaca 40200
tttttaaaag agtgatagta ttgtagcacg gtttgttttg ctttataata cttcttgatt 40260
cccttgttaa gtgacatggc agatattttt agactaaaga caatttaaga gctttaaatt 40320
attttaattt tataacttta aaatattcct tttgatttac ctttttaatt gcccacatgt 40380
ttttttagta tctaccaggt acaaggtaat ctgctaggtg tccgggacaa agacaaggtt 40440
agaacatggt cacagcactc agagtggctt actgtctcct ggaagacgta gaggcagatg 40500
ggacaggggt gcacaggaag agcctggaca gcaggtgtgc acgtggctgc tttcgtgttc 40560
tacagtaaca ccagctgtgg tttgaagggg ccactttcaa agtcagttag aaatgtggga 40620
actgtttaaa agttttctcc tagcaacttg ctcttatact agaaatgcta aaaacaaatt 40680
agaaattatt taattgctcc ttgaatcgtg acctcctggg gtaaaggaaa tctgccagag 40740
tagatggaga tgagggcaac acccagggag ggaatcccaa caggtttctt atctgcttgt 40800
cagcatgagg ctggtagcct cctaaataag aagatgtgct aatgaatagc agagtctact 40860
ggtttcgaag cacatttgaa cagagagctg tgactgagct ctgagaatgc tggcttggcc 40920
attaggcagt ttgaaactga tttgctactg tcagtttcga cccgtaaata acagggcgct 40980
ctccccttc attctcctgc ctgccacctg ccagccaagc tctcaggctt acccacctcc 41040
ctggtggcta tgccagagca cagctgagct cacctcgagg ggagcagagc tcctatcttt 41100
cctggaccct cctggctgcc tagtttcctg gctgggattc ctgacccctg gttgccaaga 41160
ctaccttgtt ggtccctgtg gagttctgtc ctgtttgccc agaggcctcg ctcagacttg 41220
ttccttttg gtacatgttt ccactccaga ctgccccagg ccccaactct cagctctcct 41280
gttgctacca gcttccagtc aatgactgtt tatttgaaca tctcctgcgc aacaagagaa 41340
tgtagtgatc aagagcatgg accctgggtc agactgcctg ggttctgatc ccgactccct 41400
cacttagctg tgtgactcta actcttctgt gcctcagttt ccttgtcagt gaaatggaga 41460
gcataacagt acctacgtta taggaatatt aggttagatg agatgtaccc gtaaaacact 41520
tggaacagtg cctgacacat agcaagcacc cagcagggat tagctgtgtg gccagatggt 41580
gagaaagggc ccacttctgt cttcacagaa gagctacttt aacacagagg tgaacttgga 41640
aggactacag taaacgatgg tggccatcag cagccatggc atggagacat cgcctccttt 41700
atgatacttc cagtcgatct gggaggtggg ggaggatttg aaatgtaaat gcaaggcaga 41760
gtgagcctca ttgccccctg cagggaagca gaacagtctg gtttggctag gtccctgaag 41820
ggagctccgt ggtgagggat cagcctaggc atggtggtgc tgagttcctt aatggggtaa 41880
gatttgggag caaggaaggc aaagggatgc agctctgaac atcacgcccc aagtcacgca 41940
aatgtgagct gcaaagtatt tcatcctgtt ttgataacta ggccagagtg catcacaccc 42000
gctaacgttg gtgcagctgg aatgtttcca gtttttgctg ttataaataa cactgcaatt 42060
aatactctta tgcataaaat tcaaaaatca ttttggatta tttccttagg agtacattct 42120
taaaattact agattgaagg aaattaactt ttttttctgt gctacttttc tctttcttac 42180
taccttttat tattttatta taaaagtaat acatatttat tttataaaaa tttagaaatt 42240
gaccaaaagc agccattgtt cacctatcac tgagtaataa cattttttcta tatatcctaa 42300
ggcgtgtacg tgtacatttt tagagctttt gactttgaga ttacagtcac acattgctta 42360
atgacaggga cacattcaga gaaatatgtc gttaagtgat tttgtcagtg tgcaacatca 42420
tagggtgtac ttagactaac ctagatggga tagcctacga cccacctagg ctttgtggtt 42480
tacacagttg ctgctcctag tctacagacc tgtacagcat gtgactgtgc tgaatactcc 42540
aggcagttgg aacaagtgct atgtatttgt acacttaaac gtagaaaagc acaataaaaa 42600
tatggtattc taatcttatg ggaccactgg cagatatggg gcccatcgtt ggccaaaact 42660
ttcttaatgc agcacatgac tgaattttcc agaaaggtta gactaattta ggttttcctc 42720
agcaggaaac aatagtgcat tgttactgct tctcactaaa ttgagagttt gttaatacga 42780

tagattggaa attgtgtttc attattgctt tgactcgcat ttgttttcct gcttgtgggc 42840
tcaatcaact cttcaatcct ctttttgcca tttctgtgaa agggcacatt ttaccatttt 42900
atatggtatc actagaatct tataatacct taagcactag acctaccagc cacatttagc 42960
taaaagcact tttttccctg ctaaggtata cttacataca gtaaaatcca ccctttttag 43020
tgtacagttc tgcaagctac acgtatagtc atgtaattgc caccacaatc aagatacaga 43080
acaattccat caccccagaa aattcccacg tgcccctctg tagtcagttc ctcttcccta 43140
gcctcagccc ctggcaacca ttaacctgtt ttgcctcttt atagttttgc ctttccagaa 43200
tgtcacacaa atggaatcat tccgttggta gcattttaag tctggcctgt ttcacttagc 43260
atgaaagtgc atttgagggt cgtccatgtt gttgtgtgta tcagtggtca ttccctttg 43320
ttgcagagta gtattctgtt gtatagatat accacagttt gtttatccac ttaccagttg 43380
aagaatattt ggctagtttc cagtttttgg caatatgaat aatgctgtat ttgcctacag 43440
gcttttgtat gaccattttt tccattttac ttgggtaaat atttggaata agattgctcg 43500
gtcatatggt taagtgtata tttaacttca taaagaactt ccagttttcc aaagtgacta 43560
taccactttg cattctcatc agcaattttt tgtttgtttg tttgtttttg ttttgagat 43620
ggagtttcgc tcttgttgcc caggctggag tgcaatggta caatcttggc tcactgcaac 43680
ctccgcctcc tgggttcaag tgattctcct gcctcagcct cctgagtagt tgggattata 43740
ggcatgtgcc accacgccca gcttattttt tgtatttaat agagatgggg tttcaccata 43800
ttggtcagtc tggtctcaaa ctcctgacct caggtgatct acccacctcg gcctctcaaa 43860
gtgctgggat tacaggcgtg agccaccatg gccagctgag aattctattt cttatgtgct 43920
tgtcagcact tggtattgtc agtttttat ttgttttgtt ttttaggtgt ggtgataggt 43980
gcatagtggt atttcattgt ggttttaatt tgaatttccc taatgacaaa ttctgttgag 44040
catcttttca tatgtatact tgctgtctgc atatcttctt tggtgaagtg tctgttcata 44100
tcttttgccc atttttaatt gggttgtttg gtttcttatt actgagtttg gagaattggt 44160
gtgtgtgttt gtttgtttgt ttgtttgttt gtttgtttgt tttttgagat agtcttgcac 44220
tatcgcccag gctggagttc agtggtgcaa tctcagctca ctgcatcctc tacctcctgg 44280
gttcgagtga ttctcctgcc tcagcctccc aagtagctgg gattacagac aaccaccacc 44340
acgcccggct aattatttta tatttttagt agagatgagg tttcactatg ttggccaggc 44400
ttgtctcaaa ctcctgacct cgtgatctgt ccacctcggc ctcccaaagt gctgggatta 44460
caggcatgaa ctaccacgcc tggcctggaa aggattttta aaaatatttt agatacaaat 44520
cctctaccag gtttgtgatt tgcaaatact ttctcctagt ctttggcttg tcatttcatt 44580
tcttctctct ccattctctc tggcttatct tttcctgtct tttgaaaagc agaaattttt 44640
cattgttatg aagtccaatt tatcaatcta ttttatggat tgtgcttttg gtgtcatatc 44700
taagaaacct ttgactaacc caaggtcaga aagattttca tctgttttct tctgaaggtt 44760
ttataatttt aggatttaca ttttagtttc ttccttttt aaaacatatt gcccaggcct 44820
agaagtttct tttggaaaac agttgcacct gagaagattt gggatggagt tggtcctagg 44880
agccttgcca ggcatgatgc tctctgtgag ccatctgaaa aggaggtgtg tgccttagaa 44940
gttgcccgag gggtggcttt taaacagata ccaggcttct ctggcttaag atttggcatc 45000
aaactgaaga ttgtatcatt tgaaaagagg gtatgggatg attagagaaa aacctccaaa 45060
ctttctagat aagtccttct aactgttgca caaagttgaa atgaagaatg gtgccaaaca 45120
caggactttg ccgattacat gtgaacaccc atgtcagtga ctcacccaat catgctttaa 45180
tctcataact gagaggcttt aaaaaattat agtcaacaag gcagcttgct agttatgact 45240
gccattggaa tggagttttc ctcagaacag ctggagtgta atgtggtggg aagaaagcct 45300
ggtgtgggtg agagaccaag gattgcttgc ctgggaagga tgtgcagcta atgtttgatg 45360
gaaatctgtg agatgaccaa cctcagccaa gctacataga ggccctccat acactgcagc 45420
cgaagtgctc agaaaacaac aatgataatt ggcactgtat caccgcaaga gagataaaac 45480
acagctctgt cttcaagaaa tgcatggtcc actctgtgat ccatgctagg ttgtagaagc 45540
tggcagaaga ttccagttcc agtaaggcaa ggcagttgag agcagcctgg aaatggcttc 45600
tccaagaatg tcccaggcag agcattgccg tgggttggtt tgttctggaa tgtacaggcc 45660
attggtgtgg ctgtgtcaga ggaagggctc ccagtggtgg tgggaaatgt tggggatgta 45720
accagggctg atctggagga acttgtttgc tctgccttga aatatgagtg ttttcggctg 45780
ggcacggtgg ctcacaccta taacccagca ctttgggagg ccgaggcggg tggatcacaa 45840
ggtcaggaga tcgagaccat cctggctaac atggtgaaac cccatctcta ctaaaaatac 45900
aaaaaattag ccgggcgtgg tggcgggcgc ctgtggtccc agctatttgg gaggctgagg 45960
caggagaagg gcgtgaaccc gggaggcgga gcttgcagtg agccgagatg gcgccactgc 46020
acttcagcct gggtgacaga gcaagactct gtctcaaaaa gaaaaaaaga aatatgaatg 46080
ttttcttgaa ttcaacttgg tgctgttgaa gcattttaca tataggagtt gtgggatggg 46140
acctcttttt tagaaagatc tctttggcag ctctgtagag aatgagttgg aaggggtcaa 46200
ggtgtagaca tcaaggaagc cagttagatg gctgtggctg tatgcaggtg aggccacaca 46260
gctgacagga gggaacagat gagagaagtg gaatcagaac cacaaaaggg agggggaca 46320
cctggatatg cccaggtttc tgacaggcag gaagacgtgc cacccaggag catcatcggc 46380
accacccagg ggaggaagag caggcattgg gtggagaccc tccaggcttg aggtgcgtga 46440
gctgcccact taaagacgct tgccaggtgg ctggaccgga agtctgctgc tcctcttcta 46500
ccttgccaca ggctgctgcc tctgagttaa agagacatgg gaagcatcgg gattgctcat 46560

```
acctcccaaa gtacagcagg aaggactaga agcaatatga aatctaattg gcaagaccac 46620
ggtgagcaca caggcactta ggagcagcac gtggcaccca tgaaagcctc catcccctga 46680
cagtgagccc agaggctact gtggagcagg aggaaaccag ccgtccttcc tccttgcttg 46740
caccctccct cctcacctcc tactctctgt ctttccagct gagcccttct cgtttattta 46800
aaaaaaaaaa aaaaaaaaaa aaagggaatt cactcccagt ccttttgaaa cccaacatgt 46860
cagtgataga tgagggcgta ttctgtaact tcaaaggaga aaagttgagt gagtgaatgt 46920
gggccagagg agttgaaaag tccaagggaa caggagaccc atggggtgac cccaccatca 46980
ggaggagtgc cccccatccc acccctgctg gtgccatgca gaggcacaga caatgccact 47040
ttcaataaat catgaaggat tctgaatgcc tggttttgtc ccattttcaa tgggccttgg 47100
gcatattgct cagatatagc cagccatttg tgcaaggttc ccagctactc aaaggctcaa 47160
agtcgagtgc tctttccact atataatgga gtcttcacat atgtgatttt gggggagatg 47220
ttttcagatt tccatagcta gtcatagtaa agatgacctc gtgggcagtt caggccattg 47280
tccccttctc acatccagcc tttgagtaag gctgcgcttt caggagtatc catgcagcac 47340
ctaattcaat cacacatctg acccctgcct ctctttcgca ctggcccctt ctctgtgctc 47400
agtgtgctgc tgggggcctc tgcacaaacc cggctgttct ggaggcgtcc tgtgctaagc 47460
agagagcact tggccatttt ccccactttc tgaattcagg gccccctggt gaatctggcg 47520
tggggatggc tgcctgttct catgaggctg cgcacatgaa ggcgcctgtt ggaagcgcct 47580
tttaagaatc cccaggttgt ttccatcctg gagtcttgca aagaaagagg aagaataacc 47640
tggggtcatt taagggctgg catggtcatt tccttaatca tctgtgacca ctgagagcct 47700
tattttctat aaagaagcac agaggcttct ttggctttgc tttagtaaca acaaacagct 47760
agaatttatt gagagcctgc agtttgccaa gtgctttcac acattcgatc atttaatcct 47820
caagcctttt acccttgttt agagatgagg aaactgagac ttgagcttaa acacttgtca 47880
aaactcacat agctagaggt ggcagaacta ggatggaatc atttctcttt ttatttgagg 47940
cagggtcttg ctctgctgcc cgggctggag tgcagtggca tgaacatggc tcactgcagt 48000
cctcctaggc tcgagtgatc ctcccacctc agcctcctga gtagctggga ttataggcac 48060
gtgtcttcat gctcagctaa ttttttgag tttagtagag ataaagtctt accgtgttgc 48120
ccaggctggt ctccaactcc tgggctcagg cagtccttct gcctctgcac ccccatagtg 48180
ttggaactac aggtgttgtg agcgactggg ccaggactag gcccagtcta tttcttattc 48240
tgcttacttt ttcatttctc tcggtagatg ttgatgttgt tttatattct tctaaaaatc 48300
taaaaaatgg atcaagtcct gaccttagga ttatttgaag agctatttaa aatgctgtat 48360
gattccattt aggtaacatc ctcaaaatga cagatttata gagaaggaga acaggtaggt 48420
agttgccagg agctagggat ggcgggggga gcagagggtg gcccaaggga gagctgtgta 48480
aggatgggac agtctgtatg tagattgcca tggcagttac acaaatgtac gtgtgtgacc 48540
aaaatggcat aaaactagac acacccatta tgccaatgtc agtttcctgc gtttgatatt 48600
gtgctataat tatgtaagat ggaaccttgg gtggaaattg gagatgggca cgtggaacct 48660
ttctatacta cctttgcaat ttcctgaagc tataattatc tcagaataaa aagtgggttg 48720
ttttttttt aattcctctg tgtgcaacac cagcattgcc cccaggaaat agccaggtct 48780
cagttcaggg gctgcttgcc atcagaaagc aagccacatc acacagtcaa agttggccta 48840
gaagtggggc acaaactaga agagggtcca ggttttatcg cctgtcagat gtgagcttag 48900
gctctctcga cttatgggaa agcactgaac tgagagtcag ggcccccggg ctcaagtatc 48960
agggctgcag ttgtgtgacc cagagcaagc ttctcaactt ctgtgagcct ccagcttccc 49020
agctgtaaag taggcatggt aactgcaccc accctgtgag tctggcagaa tgtgttgatg 49080
tgcttagtat catcttcgat accacgatca atgttattat tttatctttt cccaatttta 49140
ctcccaactt tgcagtcaga ccaatctctt gtgtattcat ggaacattga atattcattc 49200
ttattttctc tgcttttgat catttattcc ttcaacaatt attattgagc acctgttttg 49260
ttgaaaattc tggaaggcac tagggataca ttgatggaca tgccccatgt ggtctttgcc 49320
ccgggagagc taaaggtctg tttttttccc catcacctgg aatctctcct gagtgcatcc 49380
atcgttcaga tccttgctgt cctgccagac ctgaggcctc atctacacca tgcaggcccc 49440
tctaccagat cattctctaa gctccctcag tattagaggc agtgcagctc agtcatcttt 49500
gccaaccttt atcctgaacc tcccatggga cctggcatgg agctgcacac cacagagaga 49560
atgcttagca ggtgcttgcc cacagaactg tgaaaggaga gcccgaagga gacttagaca 49620
ggagcctttt gaggctttca ttttacagat gaagtcctga ataggggccc tggactaaat 49680
aataggaagt ggctataagg gtccccaacc catttttaat aggataatgc tagttcttat 49740
attgatctta atttttgttg ttgttttggg ttttttttct ttatttctgt tctgcagttt 49800
ttggactagc tgactgacat ttcctctttt aacctttttac agaccctgaa agaagctcta 49860
gttcaggtct tattactact tagctgtgtg actgggccac aactgggggc aggttcattg 49920
aattgaaaag gtgaagccaa cctatctctc acctgctctc cctgagtgga ctcacctagc 49980
acctgcaggc tccaagctt                                            49999
```

<210> 16
<211> 49999
<212> DNA

<213> Homo sapiens

<400> 16
gacattgcct ggagggagcc cacccaggca tccccttcct ccagtccagc ctctccacct 60
gcaactgggt gggtcagtct actgagctct cacctgattc ttcagcgccc accttaattg 120
acagtgagcc ttgaggaggc tgacattctt aatgccattt gcagttctct gttagaatct 180
agagaagggg aaaggtaaat tgttgcaact tgcagcctcc aacacagtgt ccctgtttgt 240
gggagaagaa acaggaagtg tggcccagta ggaaatgcca agactttaga gccgtatggg 300
tttgagttcc atttccaggt tggccggggt tgatttatgt attgccagac cttgggcagg 360
tcagttactt aacctccctg agcctcagtt ccctcacctt taagatagga gcagtgatac 420
ctggacactt gttcctggca cagtctctgg ttgcatgtgg aacctgtgat tcctactgct 480
tatcacgggg ccctgcattg ccttaactta aagcctttgt ggggatcaca aagagtaaac 540
ttacactggg gtttctctac agggacttaa aatctagttg ggacaatatg attgttaaac 600
aagtacacag ctagagacat gtttcaactt gagaataact gagaagaatc aggccatgat 660
agaagcaatt ttcatgtatc cagactgtca gaagccagcc ctctgccatg ctccaacagg 720
ctggggtggc ctcttccttc cccaggcaga gattaatgga caagttgtta ctagtgctga 780
ggttctgggc agcttccttg tggaggcaca tctgttgacc cagcagggcc ttggaagctt 840
tttttcagtc gtgagcttca tctagtggca tagggcctcc ctgatgctgg tgctctggag 900
ctagcgtcac tgggtcataa aatcagggct gccttgattt tatcaagggc tgaccccgtg 960
tcagcacagc cacaggagag cagtgtagtg gtagtggggc tgctgaggca gacagcaagg 1020
ctttgaagca ttgtatcttc ctgctgcggc ccaaggagtc ctacagaaag caagccacag 1080
agagagtgtt tcccagatac tgctcaggta aagaaattgg accttattgt tgtagaaatt 1140
actcaggttt tagagtgatc acatttggaa atattgagtc ccaatcagct tgttccagca 1200
tgtcatgttt tgaattctga tctcaactca ttatcaggaa taacctctgg ccttactgta 1260
taatacatca agaacatcat tgagtttccg ctatagctag gcactgttat tatctctttt 1320
ttacatagga ggcacctaag gtaaaagaga ttacatacta acaggaagta aagctgggat 1380
tcaaaaccca gcagcctaaa gaggctgtac cctttacttc tctactaagc agccccctgt 1440
tattggggtt ttatttttga gatagagtgt cactcttgcc caggctggag tgcagtggca 1500
caatcttggc tcactgtaac ctctgccttc caggttcaag agatttcctg cctcagcctc 1560
ctgagtagct gggattacag gcgtgagcca ccgcgcctgg cctgtcattg gttgttttca 1620
taggtagaag tgttcacaag cagaagttcc ttccttttgt caaaggtgtt tccctggcag 1680
aaaggtggaa gcaagagcat aaactctgtc tgacaggcag aaaggtagac tagaagatct 1740
agactagact aaaaagttag actttgagat cctctgtctg tcccctgagt tctagcccta 1800
cagcctctag agagattaca tggcagctag agggaaaaca agtttctgct taatgaaaac 1860
attcccctaa gattattgtg aaacttattt ttttaacatt taacattgtg tctagtttct 1920
taaatgattt tcaactgtga gattatccaa ggagtttttt attaccaaag ctaatttttc 1980
atagttagca ttacaaatag aaagtttgtt cattttcctt ctttttatcc tttccttccc 2040
cccgcgcccc ccccccccgc ttttattaca tagagacagg gcctcactct gttgccaggc 2100
tagagtgcaa tggcgtgatc atagctcagt gccgcctcaa atttctgggc ttaaatgacc 2160
ctcccacttc agcctcctga gtagctggga ccacaggtgc atgcctgtgc tgatttttaa 2220
atgttttgta gagacggagg tctcgctctg ttgcccaggc tgctctcaaa ctcatagcct 2280
ccagcagtcc ttccatctca gctcccaaag tgctgtgatt acagacgtga gccacctcac 2340
ccagccccat tttccttctt aatggatcct ggcccttcca aataccctcc atttggtctt 2400
tgtatttcat attaacagta aacttttgtc tgtactgttt taaacttcac aatacgcgtg 2460
ggttctttag tttttaccac agttaaaaca gcatctctta gactgatatg tcattctgta 2520
aagaaataga ctatctaaga cacaactaat tatcttggaa taggaacttc aggtaacccc 2580
aggtatgggc cccataggtg tcccttccag actgttctga gcgaccaatt aagagatgtc 2640
agatcaatgg gcattttgtg gctggatggt agtggaaagt gattcttcta ccaggaggtg 2700
ctgctaaccc cattgttgca ggttgaagcc agggtgtagg agcaggggag caggcagctg 2760
gggaaggagg tagattggct gccccaggtc cagaagggac ctgagatggc agtgtagttc 2820
tggaatatgt tatccagata tttggccttg tctgggagga aggaagcaga attagcacgg 2880
aatcaagtcc tgaactttga tgggagctct tagctgcgta agacagcctt atgcaggaga 2940
actcttcact gccacttggt tctcattaaa acatctgaag atgtgagcac tggctcttct 3000
gaaatcgtag agcgtctctt ctaactgata tagcaggggc ttattatgag tgctttcttc 3060
cagcaaacct agaaagtgtc tcacattcac ccgtaaaaca aaccatgagg acaaccatag 3120
aggaactcag ctctgtttaa caggtagaaa gtctaggacc atcggaaccc caccaccaac 3180
cccagaatct gggagagaac agagacaagg tcagagctgc tggctccccg cttggggtta 3240
tataactccc cgactcctca agtccctgga aactgaggcc aattccctgg aagatcattc 3300
tgttctctgc tgtttttttca agaatacagc cagcttgatc actggctctg agtattgtat 3360
gggaatgtcc cgttttcttt tttttccatg aactgaatgc ctaccattat ggtcattgtt 3420
tcatcagtct gtgtttaaac ttgcctggat ctcatatttt tatgtatgtt tggcttatat 3480
tttgaagaac tttgctttgt ttatatatac cctcatctgt ttccaaaaag attttgagag 3540
gacttacaac aaaggaaatg aacagtgagc tgcatttaaa taatagaaag acagaaaatc 3600

agaatgaagg agaggagtgt cagaaagaat ttgacatctg taagggtggg cacagctcct 3660
gtgactgggc ttcatgtttt ctgatttcaa tatcacagat gcagtcgtcc tgcttggtgg 3720
cgtgggggag ggagagttta caaggttatc tcttacaaca aaccccatcg aacattgaga 3780
attatttttc ttagcaccta aaagcagctt ctcacttaag gcttgatatt ggaaatattc 3840
agtgttacaa cagtggacag cgtttgcatt ttgggcaaat gaggaaagag ttttttgttt 3900
tttgtttttt ttttttggag acttgtccag gccttgccca gttactggcc cgtgttcttg 3960
cctctctcat gtctgagatc gcagtggcac catcttggct cactgcaacc tccgcctcct 4020
gggttcaagc gattctcctg cctcagcctc ccgagtagct gggattacaa gtgcccgcca 4080
ccacgcccag ctaatttttg tatttttagt agagatgggg tttcaccatg ttggccaggc 4140
tgatcttgaa ctcctgactt caggtgatcc acctgccttg gcctcccaaa gtgatgggat 4200
tataggcatg agccaccgcg cccagccagg aaagagattt tataaggcta tttcttaaga 4260
caaaatctgg tgaaaataga ggaacatact aacccaccct tgaggaaggc aggtgctaga 4320
gagccaagct catatgatct acacacataa ctatcctcta tcctaatctg attccaggat 4380
aaagtgtaga ccatctctga gtgggtggag agcctgtcgc ttgggctact tctgtttccc 4440
ttccctttgc tgagtgtttg accagggctg tgtagctgtg ggaggcttcc acaaggtctg 4500
cagcttgggt aggaccactg ctgagggcag gaccacaagc tttatttaga aagcagatag 4560
ataggtaaca gaattagtat attctatatg caaggaaatc tagatagcat ctttcccagg 4620
tgcacaacca tctctgtgca ttggaagggg tgatatgcag ttcctgcagt cagcactggc 4680
actttcctgt ggaagcagct ttgggtaact gcattccttc gacagtagtt ggcctgaggc 4740
ccctgagctc tgagcacaaa tggtttgata aggtgatgtt ctaacgcagt catcctcttt 4800
ggccatgaaa atcctcaaaa attctccagc tttgattagg atgagcagat tggctgcact 4860
ctctctccag ctggctgcat gtgacacacg cagacttgct catcatgctt tgtattcact 4920
gttgcatatt gctcaggcac gtgagaggca agaacatggc ccactaactg ggcaggtcct 4980
gatcgggaag ctgctgaggt aaaggtgctc ctgttctgct aaaggagacc ctgggatcag 5040
ggacgagctc ttccttgctg ggctcaccca gtaatacagg tcgtgtggga cagtggtgag 5100
ccgaactctc ctgccataga cgtgctggtg agcaatggag tcaccttcag aagaggaggc 5160
ggcttgacct gggggcatga atgctaccac caggcccttt tctcctggga ctggctcctt 5220
cctacagagc aaccctccct gtgggttgac catagctcca aagacagacg ttttttcttc 5280
tcagaaagta aaacctcagc attgaagaat ccttgtcctg tcatttttaa ccttaatgag 5340
aacagagcaa gcctctggaa caaggtgcag cgcagtcagg agaagtggct ttaagtgaaa 5400
acacagctgt ggggtttaca gacggcgctg cagggaggca tcatccaatg ggagcggcca 5460
gcctcgctat agactttcca acactaatga atcgggaact ccatgctgaa tagggtttag 5520
tttgatgggt ccctgtgcca gcagaaggat gtatttttct tgaaagacca aggtgccaga 5580
aatctccatg attacgttac tggagaaagg ttctttttg tggtttgtga agttgagcgt 5640
caggactgca ggattctctt gctctttctc actcttattt tttccaggtc agaaccagag 5700
cttggggtgg ggaggaaaat cctgctgaat gagcaagttc tttcttaaaa agctctctcc 5760
aagtccaaaa agacttcagt ggacttagga gaaagaaatt taatacattg ccatagaatc 5820
gtcattaacc aagttaaagc aaagtccaca gcatctttgt cttataaaag aaagcaaaaa 5880
ggagatggaa aaaaagaaat tatacttagg aaatccaaac caaacagtga acactaaaga 5940
agaaaaactc aagatcatct ctgaaaatgt gattttcttc taatcagatt tttctattaa 6000
aaaccaaggc tgcaggtaga agtaactttt ctgatctttt aaattctgcc ataaatggca 6060
tagctgaaat gtttgaactg tgctaggatt taccactttc agcttaagga agagttggac 6120
accctgtaag acccagtgga ctatgagggg aagagtcaac cgtggagagg ctggaggctt 6180
cccaggccgg ccttgacctg tgtttgaacc ttggtcctaa taactagcag attgaagcaa 6240
attcacaggc ctcctggaga acccatgttg gtttgaactg gagcaatcct ggccaaataa 6300
ctcacactgt gctcttacca gtgacctccc tcattacacc cctgtgaggg gagctctgag 6360
ctagcatcct aggttcccct gctcattcat ggagtagtct gcagagaaag ctgaatggct 6420
ctgtcctgct ggggctgtaa gtaccttcca ggagacgggc agagagagac ttggttgtcc 6480
atgagaggtc atcttggagg tattgcgaac aaaacaggga attcctaaac ttttaaactc 6540
attttttgc ccttccaagg tcaggccagg acttttccaa agcctcgaaa cctctgatgt 6600
ggcgtcttcc ctaactgatg gagtttagtg cctagtggcc cttgcatgac gttctccaag 6660
tatggctgtt tgacaaagct gcctgtgtgc ctgggccagc caaagatcta cctgttcagt 6720
agcccagagg gacccctggc atgcttgcct agccacactt tcctgtcttg tctcgtcacg 6780
cttctggtta ttcttatgaa tgtagcctgg cccactgtct tcaccaggct gggatccaaa 6840
ataaggtcac atatctttta atagttacat taaaagactc agtggacacc cctccttctg 6900
cttacctagg acattgtttc tgcccctaag ttctccctaa agtgccatcc ccaagcagca 6960
ataatctgag cagcctgagg aagctgtaca tagtcctcag tcactcattc ttgttaccca 7020
cctgttgcca tctgctggga gggtcgcctt gctgtctcca ttgtcatcct acccagaaag 7080
ctcagacggg cggaaggagg gcctctcaaa ggcccaacaa ccccaacagg gcctgcatcc 7140
catgttccca cagagtctgg ggaagattct cctctcccaa gggtcctagt cccttcaact 7200
catccaggct cctagagctc acccacgcga ttctcttaag gccagtttcc tgggggcccc 7260
accctagagc aggaggccta ggtccaaagg ggacccagtg gtagtctcat gctctggccg 7320
cctggagcct gccctcctgt gtgacctcag cctgagcccc tgaaaggaga aggctctccc 7380

```
attttctgcc ctggggagac tgccctttcc ttgttgggat gaaagccttg cctctaactg 7440
aacccttttg aaggcttccg ccctctgctg gtggaagctg acagagcaac cttgttgttg 7500
cctcttgggt ccttcacttc cttccctctt cactcaatac caggaccgtt gtgcagttgg 7560
aaactgtcca cccagggaag cctgttcctg gggaaaggat tgggtagtgg tgagctctcc 7620
tgcttgacat ggcagctgcc tctggagaga gaaagacctt gtgaagtctg agtggctgcc 7680
attcttgcag gctgacttcc caagctgagc tgctctgtgg gtggtccctg caggtggtga 7740
ttagggccag agcgctgctg ctgcctggtt ccttgccgtg cctgatagct aggaagtatc 7800
tagtgagcat tgttgaggga aggagcttgt gcctcttgag ggtgctgaca agatggcaac 7860
acctgaacac tgagagtgtc tgagccacag ctggtcatct ggtggcaatt actgagcagg 7920
aggcagacgt gaggcagaat ttatttactg aagaaaaaga aattattttg aaggaatgac 7980
attggacacc tgctgtgaca gtgataagga caccgattgc ccaggagacc tggtgaagcc 8040
acccttggat tctctggggg aaatacctct ggcattccag cgaaggggaa aacaaaagat 8100
cagggccact ttgacagagg agggacaggc aggaagggct cccctggaag caggtggagc 8160
atgaggaagg gcacagaggc ctaagagagc ctggtctgct ctgaacccct cagggaagtg 8220
gaccgcgtcg gggagtgcat ggagctctgc aggagctgga gagtgaccct tccctgtcct 8280
gtaagactcc ttctgtctgt cctgagggcc tccctggctg gcacaccctc ccgagcacag 8340
gcccacctct ttccattgct ctgttactgt ccatatttgt tcatgtgaac aaccaacctt 8400
cagcgagcct gggctgtgtt gaattcactt tcatatctcc aaaagcagga agccgtcaaa 8460
ggtactaaag agggaagtgt taccaggttt atgcttcagg aaaataacag ctatgttcta 8520
gagagcggat taggagaaca tagccaaggg agtaggaaga tacattgtgt gtcagtgtcc 8580
ttaggagaag catgagcaca aattacacaa gggcagtaga gggcccggag gtggcaggga 8640
ccaggcctgc ctccaccaag gcactggctg cccactttgt cagtctttgg agtctgtgtc 8700
ctccatgatt tggctccctt ctcaggctgg tggcaagctg gttgcagcag ttctggcccg 8760
catgaccaga agcactcaac aagcatcccc tcgtacctca ttggcctcgg ttgggtcaca 8820
catccattcc tgaaccagtt tctagggcca ggaaatgcca tgccctgatt ggcttaggtt 8880
tcttacctca gagctgtcac gtccagccct ggagctagag gttgggtctg cttccccccg 8940
gacccctag aatggggagc aggacagggg aatgaatagc tgagtgaaag taggccatcc 9000
ttagcaagga ggaaatgcct gctagctatg catccgtgtt tgctacagga accagatgga 9060
cccattcatt catcttttga accttgtaca tggtaagcac ctacacacca gtagggacat 9120
actttgtgga aacagcatac catcatcctg ggtgaatttc agtcctcatg aaggatcccc 9180
tacccttatc cctacccaga cccttggctc tccattcctt gacttctttt tggatcttgt 9240
ttttgaccag ccatctccaa ggtcagacac acagcctgct ctctgaccat ggcctcagcc 9300
ccttcaactc ccttatccag tgactcccac actcctctcc ttgacctctc agacactaca 9360
cccagtgatt agcaacatgg accatacttc agctgtgcca cttacttggt aatttgggcc 9420
aaatacttaa taaactctcc tgtaacatag aggtaggaac cggctttgca gggctcttgc 9480
gaggattaaa taagatcagc gtgagagatg cttaggacag aggacgtgct taataaatat 9540
tagctccatt ccagacatct gtcacccagc cgcttccttc tgttttcttc ccatcagcct 9600
ctttcccatt tatttccttc ctgttccccc gtaggtctcc tggtccatat gctgccgtat 9660
tgtatctcca ctcccttacc cccttattct tccctcatac cttcctggca gatattcagc 9720
ttggaccaac ctaactttct tcacactaat gtctaagttg ctagaaaaaa attaacagtg 9780
ggacagatgc ttgctacagt aacttcagat cctgtggcct ccgaatactc cctggcaata 9840
ctccctggca atccttatgc tctgcccagg tcaactgttt ttcctattct ccaaaggagc 9900
aatttcaaac cttcatcact ttcctcaaac tccttccccc atcacactcc ccattctttg 9960
cagataattt gtgtcctaat tttcaggaaa gaacctaaaa aatcatacta ggacattcta 10020
aatccccccc gcccaatcca cagatcttac tgttatcgct gcccatcttc cttcctcttg 10080
cagccaagaa aggggttcca cttttgtgtt ggatccaatc ccttgtcatc tcagagacct 10140
tgaatctgca gttctctctg tctctcttaa tgtcttctac tccaccatcc atagtgcctt 10200
cttcctgtca gcattgaaac aagtctctgt catctttaaa tatactccct tcaaacacct 10260
tcagtacact ctcacatcct ctcatccttt cccattccat ttcatgaatc ttgcctcttc 10320
cctagcactg tctaatttgc taaaagagtt gtattcactc atgattgcca tttcctggct 10380
ttctattcgt ttttcaacct gtcaccccga tctctgcccc cagcactccc tgcaagagtc 10440
ttttctgata gatccaaagg attccttgtt tgggaatgtt ctctgttact tgacctctta 10500
gaaggattta acgctgctga ctatgccctc cttgaggcat gttctctctt tggcttctat 10560
aatgtcagaa ctcagaactc catagccact ccccagtttc tgttgtccag ctcttaaata 10620
caggtgtttc tcaggattct atccagggct ctcttatccc ttcaggttac aatcttgctt 10680
ataaacttca gaactgtatg ttcagcagcc tactggccat ctccactaga tgcctcccag 10740
gtatgttaga atccgcaatc tcagattgaa ctcaaactct tctcccaaac ctgtttttct 10800
tccttgtcag ggtgagtagc aatagcatct gccctgcagc ctgagccaga gaatcctgaa 10860
cacttgttga ctcttccctc tctcactgac tttatctcca gaccatcacc aagtcctgta 10920
atgctggtga ggtgaaagga gcatggattt tggttaaaat tccagttcta attgtggttt 10980
gctcaaacta cttaatcttt ctcagcctca agttcctcat ctgtttaaag gaaatagcaa 11040
tacctaattt aagtggtttt tgtcaggata aaggaaagcc tttacttggt aggtgatatg 11100
gtttggctct gtgtccccac tcaaatctca ccttgaattt tagtaatccc tcatgttgtg 11160
```

ggagggaccc agtgggaagt aattgaatta tgggggtggg ctttccctgt gctgttctcg 11220
tggtagtgaa taagcctcac aggatctgat ggttttgtaa atgggagttt ccctgcacaa 11280
gccctcttgc ctctcgccac gtaagacttg cctttgcttc tcctttgcct tccaccatga 11340
ttgtgaggcc tccccagcca tgtggaactg tgagtccatt aaacctcttt cctttataaa 11400
ttacccagtc tcaggtatgt atttattagc agtgtgagaa cagactaata cagtaggcat 11460
tcaataaatg tgagtcctcc atttagtaaa catgactgct cttctgttcc agtcctctct 11520
ctcccctacc ctatcaccac ctctgctgac ttgccttatt gttgagttgg tgtgaacata 11580
gtttcctgac tttgagactc cccctgcaat tagatttccc atagttcctt catgactaag 11640
gactaagtgc tggtcaccac agcattgtgt ggggtctggg aggcagatgc cagatgttac 11700
tggcacataa ttagatgtgt atgtacttcc aagtcttgtc tcttagctgt ctccaacgcc 11760
actgcacctc cgtaagccaa atcctcatca tctcattggg ctactgcagc agccccctct 11820
aaggcatttc tctatgccct ctctcacttc agcccttctc tacctgacca tcagagctgg 11880
tctttctgcc ctgaaacctg ccatggcttc tctcttctgg tgaagtgaag ttcacacact 11940
cctacgtgca gcctgccttg ccagctcatc tcccttgcat gcctgtgcca gcccagtggc 12000
taagtcctct ctgacccagt gacacctttc atgataaggg agcaagaagg atgcttagat 12060
actgattgag aagctgaata ctatacttct tgggtctagt ggctagtagg acaggcataa 12120
gacactcagc taagaccagc tgtccagaaa actgggacca aaagacacag gaaacccagg 12180
agggcttaga attctgtaag aatcaccagt cataaaataa ggaggaaaac ctattagtct 12240
tctgtcaaag cagtgtatgc ttatgaagaa tttggaaaat gcaaagaaag taatcacctg 12300
gaacctctca gctagtgata ggcactgttg ctgtttaggt atgttccttc caagtctttt 12360
ttttttttt tttttgagac agactctcgc tatgtcgccc aggctggaat gcagtggcaa 12420
aatctgggct cactgcaacc tccacccgcc aggttcaaac gattctcgtg tctcagcctc 12480
ctgagtagct gggactacag gtgcgtgcca ccacacccag ctaatttttt gtattttact 12540
agagatgggg ttttaccatg ttgcccaggc tggtctcctg agctcaggca atccacccgc 12600
ctcggcctcc caaagtgcta ggattatagg catgagccac cacatctggc ctcagtcttt 12660
cttctaggaa gtctttgtcc ttttttacat agtcttcatg gtacactgta taatcaagtg 12720
tgcatcctgc tttatctcat ctgtccaacc tatttttcct gggttagtaa aaattctccc 12780
taagccatgt aacaactacc tgctattcca tgtgtgacta tagcatagtt tgtttaacct 12840
tttgccactg ctggactttt tagtctttcc aataaataac actgggggga acagttttgc 12900
aaataaaact tttcttccta catttctgat gatttttcta agctataaat tcataactta 12960
aatcactgag tcaaatcata tgaaaatttc taagcaatgc agactcaaaa tggacagaat 13020
gaatatagac ctgacctcag ctgcaaagag agaggtaaag agaaaagggt tgtaactaat 13080
agatgctttt aaaattatgt tttacttcac aaaggagagg gctgggaaga ttcaagtggt 13140
gctctgtagg gcaaacatgc ctttgacttg aagttctggc ttcatgatgg tcgagaaggg 13200
cttgtttctg cttttgtgtt ttcatctggg tcagttagag gacaaaccat tcctgtgagt 13260
tcctttccca ctaaggaaga gaaaaatcgt ccagtatcta atgatgcaga tcattagctg 13320
tgttcgcagc cttgtagtta aaaaaaaaat tataataatg tatcctccta atgtgcagtt 13380
aattttagtt aaaatctccc tagtgcttta aaaacccagt gaatttataa acatagtagt 13440
tggcttgcat ttggaatgtt aaagctgtca taaccaactg gctctagcag ggcatgctgc 13500
acctccttga gctctgttgg aagttcagca ctcacctgag cactgccctc tggaatccag 13560
aaagaaacca agactttccc agagttcctg ttcctgatct tccataactg aagaaagcta 13620
atgagtgtct caaagttaac atgtccaaag tcaaaccttt gactccctat cagtccccaa 13680
attcagtctt tctctcagca gtggatcagc cacctgactg gtgattcaga ttcaaaatct 13740
tgaaccgtcc ttgagttctt cctttctttc cttaccactg ccaacatcaa atccaccagc 13800
atatcttgtt gattcgactt ctaaaatgta cctcaaattg tccatttctc tcactctatc 13860
ccagcccccc tggccgctcc cctgactgta gtggctgcct cctgcaggat gttgcttctg 13920
ctctgtggtc tgtggtctgc agtctgcact gtagccagag gggtcttgcc aaaatagaat 13980
tctgattacc tcatctactc cttctttttc ttttcttcgc tgttaaggta aaggccaaaa 14040
attccagtgt ggccaagaag gtcctcccca gagtcaccca ccatgtccct ggatctatca 14100
gcgcccaact tcaccagcca tcctgcagct cctgccccag ggcttctgca ctcactgtgc 14160
tctctcctca ggagaaccct ctccactccc catccctcct cctcctgatt cagaggagcc 14220
ttcccttcta cccattctat ccaggtcagg ctcttcactt tcatggaaac atggggattt 14280
ttttcttgct tcagagagcc tattttaatt tgaagttcta cacatatatg cacattcatt 14340
ggtgtgatca tttgattgct gtcagtcttc tctgctagac ggtaagaccc atgaaaagag 14400
tctgctgtca ctgttctttc cctctcagct agctcatgtc tagcacaaga taggtgctta 14460
ataaacgtat tggttgcatg ctgaatgaac aagtagagtc ttgctgacag tcatcattga 14520
tgatggggtc cttgtaaggt gtgggctctt cccagagtgg gcaggcccag gttctccaca 14580
acacattgac ttgagggagt gtgacttcgt ttgattttat ttttttcatt tcagctattg 14640
gaatgaatag agcatgctgc ctaaaacttc tttttctctt ctctctctct tcagctaaag 14700
cttgctttca ctctggacca cgagaccgga ttgcctcaag gatgtcatat ctatgagtac 14760
cgcgagagca acaagtaagc cactcagtgg gaaagagtgt cacttcacat gtgtgcagca 14820
gtggtgcctg tgggctttct gacactgagc ttccattgct aagtggttgt caggaaggga 14880
atacaccttt tactactata ctagaaaata gctggcacag aaatagtcct cttgtaagat 14940

ctctttgccc ctaagtatag aacttggagc acttgcagag gagcagttgt ggtgtgttag 15000
aagtagatgc tgaagcagac cttctttcaa ggctgcagat gtcccccaga ccctccccac 15060
tcttggtctc cagtcatgtg cctgcttgtt tggttcactg tgtgactttg gctttgttgt 15120
agttctcagt cactatctgc ctatacttag gtttatgggt tttgttgtga ttatctacct 15180
tgtaaatttt atattaatgg ttgggagatt tccgggtact tacagagatt taaattggtg 15240
cccttgttgg aaaggtggca ccttgcatac tttcatagca cctcctttcc acatcataga 15300
ctgctccttt ttttttttt ttttttgag acagggtctt gctctgtcac ctgggctaga 15360
gtgcagtgat agaatcgtgg ctcactgcag cccaaaactc ccgggctcaa gtgatcctcc 15420
cacctgtttc ccgagtacct ggtactacag gtgcacacca ccatgcccag ctaattttct 15480
aaatttttag tacagacagg gtctccctat gttgccctgg ttggtcttga actcctgagc 15540
tcaagcgatt ctcccacctc agcctcccaa agtgctggga ttacaggtat gagccaccac 15600
acccagccac agactgcctc cttgactgtg tattttcgtt tgtgagacag tgaaagtggt 15660
ggtgaatgag gcacaggaac tgtgccccga tgatgacaat gatggtaatg acagcggcta 15720
ccattgagca cctcctatgt gttaggcaca gtactgggga ctttacattt gttatctcat 15780
ttaatcttca taacaacccc ggtgtgttat tttattattg tcatatttgc agaagctaag 15840
gtctagggaa ctaaagtaat tcactcaggg tgactcacca cggctgtgag aagcagagtc 15900
aacattatca tgtttactct ggggagagaa tagaaggaaa acaagtgacc cgtattttta 15960
cttagaaacc ccagtcaatg acaagagcag tcccatcctg gacttaagga gaatgtactc 16020
tggtctcatt gtctaaatat ccaggctgtt taattttatt cagtggaagg aaacaaatag 16080
gcacatgcca gtagaactgt ctactgtcta tgaccttcca gaagagaaac ctgggccttc 16140
ctcaagacct ctggtgctgt ttagggtaga agagaggcta ccgggtgccc tcgttaccac 16200
atctccactg ggattacctt caagacatga tgactgtttg taatttatct ttaggagaat 16260
gccatagtaa ctggtgtgta cccctaatta atcataggaa ggattgacca gacatccttt 16320
aacaattctt gctggactct ctgctctttg ggaaaaggtt gaagagtatt tattcaatgg 16380
gagaaggaca ccagctctct gtcctttaag tttatgtctt agctgttcac atatctggtg 16440
gcaacaactt atgttgtctt tgactgtgag aagagaaaat agcctagctc ttttttttt 16500
ttttttttt tttaatagaa acagtgtctc atgatgttcc ctaggctggt cttgaactcc 16560
tgagctcaag ccatcctctt gcctcagcct tccaaagtgc tgagattaca ggtgtgagtc 16620
atcatgccca gcctagctct gtgtcttggt tgatccatag ctcctagcat attatcagac 16680
caagcaatgt aagaagataa cttagggttt ataaatatga ataagttttg gcccccaaag 16740
acctctaaaa gaaaatactt gtgtaggaaa tcagatagga gccatgatct agaaaagtat 16800
ggtgatcagc atgttctcac tcataggtgg gaactgaaca atgagaacac ttggacacag 16860
gaaggggaac atcatacacc ggggcctgta gtggagtggg gggagtgggg agggatagca 16920
ttaggagata tacctaaagt aaatgatgag ttaatgggtg cagcacatca acatggcaca 16980
tgtatacata tgtaacaaac ctgcatgttg tgcacatgta ccctagaact taaagtataa 17040
taattaaaaa aaaaaggaaa agaaaaaagt atggtgatca aatgctttgg tgactgcttt 17100
ctctggttct ctcttgcttg tattagagtc agtcttaggg ttcattctca atctttagac 17160
aactttccta acctctctga gcctctagtt tcatttattt tcttcttctt ctttttttt 17220
tttttctatt ttttgagata gtcttgcttt tgtcacccag cctggagtgc aattgcatga 17280
tctcagctca ctgcaccctc cgcctcctgg gttcaagtga ttctcctgcc tcagcctccc 17340
gaatagctgg gattacaggt gcctgccacc acacctagct aaattttgta tttttagtag 17400
agatggggtt tcaccatatt ggcgaggctg gtcttgaatt cctgatctag gtgatccacc 17460
tgccttggcc ccccaaagtg ctgggattat agtcgtgagc caccacgccc ggcctgagcc 17520
tctagtttct tcatctatag gatgaagtag gattaatagt aggattaatt attaattgtt 17580
aattaattat taatagtagg attaataata cctctctggc agggttgcat ggggctctct 17640
ggccgggata tcatgttgaa gtgtgtcatc accagtctca catatagaat gcccatagga 17700
agtgcttgtt gcctcttctt cccaaagaga aaaactggct catgacttcc atcttcccag 17760
aaagtcttct gccaacagtg tactcatgag ggaagaggct ggtgtgcctg ccgttcacag 17820
cctttggttg tgtacgacgc tctgtcaaag gcagactcct cactcatgag ttatgaagca 17880
cggaggaccc caaaatcctg actatgattt attgtctccc ccagaccctt ccctgtttgt 17940
gttcctctgt ttccatttag ggtcattttc cctacaatgc ctgaatccaa atattggcat 18000
aatagtgtta tttaggaaat gaagatactc agcccagacc cttaaggggc ccatgttgtc 18060
tcaggctaag taacatgaag acaataccag cagagagagg aaattctaca gatgaaaaag 18120
ctagcttgag tattagtttg gtacaactga ttattgaaac tactgccttt ccttttttgga 18180
tattccctgc agtacaattt gtaatcactt tagcattcat ctctgtttgc caaattcaat 18240
ccatcagcag aaaaagttgt tctgaataag tgctgaggct gttggatggt tctcccaaat 18300
agtctttcct ttcaaatgga atggcccgga aaatgggcac tccatttta tattttctgg 18360
attcttttat cagccctcca ttaacgggat tcagtatcaa aagcaggtaa agttttctgc 18420
aacagagaag aagaatgtgg ccctcgggtc catgggtggt gcctgataat tttgatcctt 18480
ggctctctgt catcctgttc tcctttcaca taaaggggct aatctctacc tctggggtcc 18540
agggaggaca gtccctagga cttgtccatt tctcatggga cttggaccct gccttctcta 18600
aggctagagg cacagctgtc gggtaaacat tcttaaagct ctgaggtcat tagaagaaag 18660
agagaagctg tcctatggtg ccttgggttc aactagtaaa gctctccacc ctgaattatt 18720

```
ctgtcagcct cccaaaagct gctccagtct gcatctggag gtgtgaggcc tcacaccccc 18780
tggcagatgc caccgtgggt ctacgggtgg tgactggttt ttttttttc tctgttgcag 18840
aaaactttac ctgtctttaa cactaaatcc agttaatcaa ggagtgatcg agagtcattt 18900
ttgtcaaatt gaagtttgga gatctctgga tatagggcaa ggaacaagac cttcaggagt 18960
gaataagtga tttgtgagaa ttcagttaca catttatgaa gcccctgctc tgtacagtgt 19020
gttacatggg ggaggcaaag atacgttaga cccagtgcat gccctcaggg tttgtataag 19080
gagcaaagcg cactccagca ccctgtggga tgatatgcac tttggcagtg gtaggaatcg 19140
agtgctatgg cagcaacgat gaggaaagtg aatgcttccg actttggagt tactgtgtgg 19200
atggtggtga ccttcacaga caaggagctt tgtcagaagg ctcctttctc tccatcccca 19260
cggctaccct ccttctcact gccaggactg tggagctgct ttgcaagcta ttcttcctgc 19320
cgttagctgg ttggcctccc ggctgtcctc tctgcagcct gagtgagtgt gtgtgtcttt 19380
tccttctggt tgctttttag accttatttt tgtctttggc attctgcagt tttactacat 19440
tatgtctgag tggattcatt tttatttata ttgtttagga ctcaatatag ttctcattta 19500
gaaatttta tctattatct ttgattctct ttggttctct ctaatctctc cttctggaac 19560
ttgttagaaa ccatcttatt tcatctttcc tctctttttt ctatttctgt atctgttaat 19620
gctgcattgt aggcaacttc ctcaaaagtg tctgtcactt tattctcctt gtagcagttt 19680
actatcggct gcttaataac ccttcccaat atgaatattt ggtttttatt ttattttatt 19740
tatttttga gatggagtct cgctctgtca cccaggctgg agtgcagtgg cgcaaactca 19800
gctcactgca acctgcacca cctgggttca agtgattctc ttgcctcagc ctcctgagta 19860
gctgggatta caggcgcgca ccaccacgca gggctaattt ttttgtattt ttagtagaga 19920
tgggatttcg ccatgttggc caggctggtc tcaaactcct aacctcaggt gatctgccca 19980
actcagcctc ccaaagtgct ggggttacag gcgtgagcca ccacgcctgt cctcatgttt 20040
ggtttttata tttaattttc agaagttctg tttggtgctt ttgaaaatcc gcctattact 20100
attaattaat ttttttggtg tcctagtctt ctgttatgat ttctattctt tcttttatct 20160
ccctaattat tttggttgta tttattttac agcctctttc cagttatttg aagagtttta 20220
gttctagttc caagagtacc aattctctta tttcttgtgt ctattgactc actcttacgt 20280
ggttcatttt ctcttgcaac ttgtttttt atcataagat catcttaggc tgtgcgcagt 20340
ggctcacgcc tgtaatccca gcactttggg aggccgaggc agaaggatca cctgaagtca 20400
ggagttcgag accagcctgg ccaacatggt gaaaccctgt atctactaaa aatacacaaa 20460
ttagttgggc gtgatggcac acacctgtaa gaccagctac ccgggaggct gaggcaggag 20520
agtcacttga gcccaggagg cagaggatgc aatgagctga gatcgtgcca ttgcactcca 20580
gcctgggtga cagaacaaga ccccatctca gaaaaaaaaa aaaaagatca tcttaagtag 20640
ggattgtgtt tagtgggagt tccacatact gtgggttgtg gatgtgttat cttatcactt 20700
ttgcatatgt tctgccaaga cccagggagg ttcataggtc ctgctagttt ggatgttaac 20760
tccttggctt aggagtctca cctcctgggt aggccacatt ctgactcctc acccatgtgc 20820
cgtgtgggct tcacatctcc atttctcata ggagatgcct ctggtctgtg ccacatacgg 20880
ccattcctct gctctgtgag aaaggtcttc ctgattcttt gttcaaagac caacagctcc 20940
caggatcctg gctttatgtg gggatctcag ttccagttcc atgaccaggt cttcagttcc 21000
atggccaggt cttctgcctc ctgcatgcat taaaatctta gctcctgtaa ctgtatcaac 21060
gtctgatact cccggccccc agttgccacg gtaaaaatta cagctctgac ttaatttttt 21120
tttcacttca agcatctgag aattttctca ttattcttct atactcaata atatatttaa 21180
attattattt tggtatattt tatctattag ttctctgtgt ttgtgttggg aaggaggtcc 21240
acatcagttc agtctactat cttgtcagaa tcggagatct gaataaactt aaatatggtc 21300
actcatttag caaatgtata gagaatatct gctatatacc tgtatagttc taggccctgg 21360
ggccacagag ctgaataaac gctgatgctg ccaacagagg cccatgtgcc agtggaaggg 21420
actgggcact cctcagcagc aaggcagcca gccctgtgat cccaccccac ctgcctgcca 21480
tacagaccca tcctgtcttc ctgccctggc accctacatg ctgtctgtac cagattacct 21540
cacgctcctg cgtacaacgt gtccctgttg tcatgccatt ttctgcttct agaacatccc 21600
tctttcccag aaccccgtgc ccacccatct aggtaacctc tgcttctcct tccactctca 21660
gctaggtatt tctcctctgg gaagccattc cacacccctc acaggcacca ccaaagctgg 21720
gtcagatgtg ccttccccgt ggccctgtgc cgtgcctgtc tgctccatgt cagctcttag 21780
cactgtgcct ttcagttgtg ggtttgcttg ttggcttccg ccactggcct gatgcttttg 21840
aggtcaaggt cttgtttttt tcatttcagt acccacagtg cctaatccac tatctggcaa 21900
ataatgcttg atgaagggaa ggtgggggac ctgatttagt cctttaggaa gggagggagc 21960
atggctactg aggagtcaag cttctttcca gctttgtctt ttcatttgcc gtaggattat 22020
catgatgatt aaattacaca tgacatcagg gaaactgtct tcatggatag ctgtgaattc 22080
tgaagagcta acatggagaa aagaagctgt aaaaatgtgg cttaactcta aatatagtgg 22140
taattacagt cacttacatc agtttttttt tgccattttt tgccgggtag tgaagaacag 22200
tgatagctat gaagagcatt aaacatgtca gacaaacttg tggaagctga attcgattgc 22260
aaggctatac tcttgttcac gacatctaga ctttatgatc catgtaccat aatcatgatg 22320
ggagctacca tcttctgagt gcccgcagac accaggcaag gggcttaccc aggttagttc 22380
tagtctaaaa ccattcaaga aggatattca caataaaaaa taaaaataaa accagtgaga 22440
gtctgagagg ttttattatt ttcacaattg tacagaataa aaaataaaaa caaaccaaaa 22500
```

ctgaagagtc tgaagaggct cacctgccaa ggccacagag gtcaagggca gaacctggcc 22560
agttgtggca aattctaaag cctgtgctgt gccttcatga cacctgcctt tctctccatg 22620
ccaggaagct gcagggagtg ctgattccag ccgtttctaa gcaggcctgc ttgggaaggc 22680
tgtctgggaa atcctgggat ttccagtccc tgtgaacccc aggtcagatg ggcagcttct 22740
gacttgtcat cagagttctg ggttaggcca gtcacgctgc ttggcaggtc accatccatt 22800
cagtggtatg tgatgtggct gtgttagtta taaagacctc gtagttttgg gggtgcagtt 22860
gccctgaata cctgcctgat tggcccttgt agtagaccct ggcagaccca ggccctagct 22920
ttggggtgcc tgctcctctg ccctgctggc agttgtgcct cacttggtcc agacagtgag 22980
gccagcagtt gctggcagat ccgttgtccc tgcggacctc tcagagcctc cttgacactc 23040
acagccaggt cctctgcctt actgcagttc ttactcttag aacaggttag tttgctaaac 23100
ttaacaagag aaaatcttcc attttttcct gcctagctac tggactcatt ttgggacctt 23160
gaaacacaca tcattaaact tactagctgg cctctagatg tgtgagagag agctacgctg 23220
tgggattgat ttccttcggc tgaagtgtct gccgcattca tgagcctgcc ttgaaggaca 23280
gtactccttg cagccttcca gaggataggg cagttctggg ctgtacatcc tctccccagc 23340
ccacaggcac ctgctagctc aggtcactgt aaggacacct gggttctctt ccccagcacc 23400
tgagcacata gttctttctg cttcccaaca tgccccctgc ccgtgggggc ttagcctgct 23460
tggcatcccc cggggtctca gaacacactc tctagacaca atagacctag agaaccaacc 23520
ctaaaaccac actgcggttc tctgttgttt tgtgtttatc atggaggatg tgatgggttc 23580
gttcaggtgc tctgacaagt ggaccccaag caggattaat gtacgagagg tgttggggga 23640
aggcctgtga aggatgaggg gagggaacag gggcaggccc ggggcttcct tcaccttaca 23700
gcaaccagcc cttgtagaca gtatgcatcc cagggctttc ccgtgctggc attatcacag 23760
tgactcagga gcttcttccc aggtcactgc tggtgagtct ttgagcagct gagccacaac 23820
tttgtaccag ggcctgtccc tgcccacaca ccactcagaa gagcatcccc tttgcccact 23880
aggtagtgag tgagccactc cccagactct atctttctgc ctgtttcctc agaaccactc 23940
ctgtcccact tgcgtcagtt cagatctgca gagaagcaga tgctgagatg ggattggatg 24000
ttgagaaaca tatggaggaa gatgcctgtg aaggatgaaa ggggagagag tagcggaagg 24060
cagagagagc cttcagacct caacacaagt ctggcccttа tgaaggaatt tggaaaggaa 24120
ggagggctgg gtagggagag tctcaggcta cggcccaggt ttttttgttt agttttgttt 24180
ttttgagata ggatctcatg ttgcccaagc tggtctcaat ctcctgggct taggtagatc 24240
ctcccacctc agcaccccca ccagctagga ttacaggccc gcacaatggc tcccacctgc 24300
ggcccagttt taaggttcac tgacggaaag tcctcaagcc aaagccaaag ccaaagccaa 24360
agctgactgc tggaggatcc tcacatcttg caggacctgg cctgcattag gaccctggag 24420
gcgtgctcac aggaagtgtg acttcagggc agatgcagtg gtggatcaga gcacttgcag 24480
ttggggacat tgtcagtagt agaagatctg agtgatgcct cttcctggct gctgcacttg 24540
aggaggggac agagcagggt gttcctggat gaagtcctgt ttaattagct tccccccctgc 24600
ttggttcttt gcctttgcct tcatcctgaa taagcagagg aaatatttcc cagcagctct 24660
gacaacttca aaccagcacc aacacttccc agtactttgg aaatgacact ttctgtctgc 24720
accttggaac tgatgccagc tcctcaggct aagcagcagt gttacctaag agccattcat 24780
tgcagagggc gagagcctcc aggcctccca gacactgcca ggttagcttg aagaaggcct 24840
ttcttgttcc tgatgaagcc ttagtttagg agaaaggggg gcttgaaatc aagagagagg 24900
aggggcttgg gggaagttgg aagcgatgca gccagagagg tgccaggcgt gagctcatgg 24960
gtgcaagcct gcagctgtat tgtgcacgtg ggagtcagcc actcacagtg caggtgtgag 25020
ctcactgttc caccacagcc gttagtgttt ggcatcagca tgatgcaggc acaactcctg 25080
cttccactgc tggattcggg tagtgttcag cgaagggagt gtctctccac cgtccaccca 25140
cacagaggga tggccgtggc tctctatgct ctgctctctt ctcacctcac tccgtgcagc 25200
agcaatcagg atattttgtc tgccaacaag cagtgcttca tttaacctca gttttatcta 25260
caggaagagg agaagagggt atgaacactc ccattttaga gagagagaaa cagatgccct 25320
gataggtgcc ctgtgcaagg tcaagctgta cataagagga ccatccagca ggcttctccc 25380
tggatactac cccagctatc tgatgcaagc aggtgtgggg ccctagaaca actacacaga 25440
agtggcactg agttgcccat gggtccagga gcagggaggg cagcaaggcc tggggcagca 25500
cagctgcctc ctgtattgct tccatctcct ctggagtcac agtcacccag tctcctccac 25560
atggaatctg aactgcaaag ggccaggaca aggaggagct ctttttcagc tgtgttgagt 25620
cagtgcctat tccccacttg ctgggagaac cagggaggga cagagtctga agtcatattt 25680
tatagcactc agttgcctcg gcagaggttt cccatgctgc tgagctatgg tgctcaggac 25740
cctttgtaga aatcactaga ccttcagctc tttctggctt tctgaggcca gaactgaccc 25800
aaacaaggaa atgggggagc cgcaaaaatc ggcagattgt gctggccaca gaccagtcac 25860
atacatcagt gtacacacac aggaacactg gtccatgtct cagcatatag tgtgacttat 25920
gcattctgct attttttttct gtagtgcaca tactggaaaa taggttttta caataagctt 25980
gctttgtaaa acttacttct gaattatgac atgcatagag aaaagtgtac aaattataag 26040
catctagttc aaggaaattg ttagaaaatg aacacatcca tgtcaagaaa tagaacatgg 26100
ccaggtgcag tggctcacac ctataatccc agcactttgg gaggccaagg caggaggatt 26160
gcttggggcc caggggtatg acaccagccc gggcagtgta acgacaatta acaaattttt 26220
atttaaaaat aaataataaa tagaacatta cagcttccag gagcctccca tgtgcccctc 26280

actcctccca aaaggatacc accattgtta tcttctaaca ctgtagattg gttgtgcctg 26340
gctttgaact tcatataaat ggaattattt actatattct cttttgtgcc cagcttttct 26400
ctttcagcat tatatttgtg agaattcatc tttgctgttg catctatagt ccattcatca 26460
atttatccaa tctgcatttg ttcagtcaac atttgtattg tttccatttt ggggttatta 26520
taaatctgct tgtacatgtc ttttggtgca catatgcatg tgttgctttt gagtatataa 26580
taggaatgaa attgctgaaa tcatatgtaa tttcacaagc agtgtgtgag agctcatctg 26640
tttattggcc attcagtaga gtgccttttc aaatttcttg cctgtttttc tactgggttt 26700
tctgtttttc ttcttgattt atagtcctct atattctgga tatcagttct ttgttgctta 26760
tacatgttgc aaatatcttc cactgtgtag tttgcttttt tactgcctct ggtgttattt 26820
taacgtacag aagtacttaa ttttaatgga gttcagtatg tcgatctttt ttattatggt 26880
taaatgcttt ttgtatacca tttaagaaat ctttgtctat attctaaaag aatctactta 26940
gaattgattt ttgaaaatgg tacagcaagt ttatttttc atatgggtat ctgttgaccc 27000
agcatcattt tttgaaaata ctttcccata gcttagcact gccacctttg tcaaaaatga 27060
agtacccata tgcacagatc tgtttctgct ctccattctg tgtcactggt ttatatatct 27120
attcttgtac cagtaccaca ctaccttcat gtttgtataa aaatcttgat agccagtaga 27180
gctacacttt ccaacttgga ctttttctat aaagagcacc tatgctattc ttggcccatt 27240
ccatttccat atagatttta gaatcagatt gtcagttgcc acatacatgc acacaaactt 27300
gctaggattt atattgagat tgctttgaat ccatatgtca atttgggaaa aatcaacact 27360
tttatgataa tgagtcttca caaacatggt acctccctct atttagagct tctttaattt 27420
ttctcaatat aattttctgt tagagatctt gctcatgttt cattggattt actcctaggt 27480
atttgatttg tggtactatt ttaaatggta tttgtaaatt taatttttctc tttgttgcta 27540
atacaaggaa acatggttta tttttgttga ccttgttatc aattactttc ctgaatttat 27600
ttattaggtt caaataattt gtagattttt tttcataaca atatttcagt tcagtgtaga 27660
tgctttttta tttccagtgt acctcatcat gtcatctgca aataatgaca gttttacttt 27720
ttcctttcca attctcatgc catgtattta tttttcttgc cttattgcac tgtacagtat 27780
ttctggacat aataataata ggcatttatg tcttgttcct gatctcaaac agaagagttt 27840
ttaccacaaa ctcactctta gattatgaaa atgaaaattt ttactggtgt tctctttagt 27900
atacacttta tttttcccca agatgagttt tcaatttggg aacttttttt taagttttaa 27960
gtggtgattt atgagctagg agctaggaaa atgatatctg attttttatt taaatgaaaa 28020
ggaactaatg tttatcacaa gactgctact cctcatttta accttgtgag gaggttttgc 28080
cttggccatt ttacagaagg atctcatggc tgtacatttg aacaaggatt caaacagatc 28140
tgtctgactt caaaacccat gctctcttta ctgctccctg attccttggt agaatattga 28200
acgtgaaccc acgaggtcgt aaaaatacca cttttgtcat agatgaccga gagaaaagtt 28260
gctaaactat tattgcctca caggtatatg cagcatcttt tcctttcccc agtaacctcc 28320
taccccaaat ctctttatat ccctgtgttt tagtccattt tcatgctact gataaagaca 28380
tacctgagac tgggcagttt acaaaagaaa gaggtttgtt ggacttacag ttccacctgg 28440
ctggggagtc ctcacaatca tggcagaagg caaggaggag caagtcacat cttacaagga 28500
tggcagcagg ccaagagagg gcatgtgcag agaaactccc atttttaaaa ccatcagatc 28560
ttgtgagacc cattcactat catgagaaca gcatgagaaa gacctgcccc cgtgattcag 28620
ttatctccca ccacgtccct cccacaacac ataggaatta tgggagctac aagatgagat 28680
ttgggtgggg acacagagcc aaaccatatg acactatcac ctgccccatc ccacctttcc 28740
ctgatttcca ttgccatgga aaggagccct ctgggcctgc ctgtggccct aaagggctgc 28800
agccctcctc agcaccggcc cagcacccac tgggcccagt atagggcatt ctccagcctg 28860
tgctgtcatt ctgtcgcctg ttgtctggtg ctgggaggta ggattgaagg ctttcctcct 28920
gggcgggctg ctcaggttgc aaggtagatc ctatattttt aagccctgta gagtctcagc 28980
tgtcccattt tgagggttat gcatcctaca tgggttcaca gaatcccttt cgctgagact 29040
tggaggaatg aagaggacag agagggtcga gacccaaacc gagcaggccc cggaggcctc 29100
agggccctgg ggctgaaggg agctccctag cccgagaatg cccctcacta ttctcacact 29160
ccacctttg cagcccaaat acccatggat gccccaagag atttccctat gagacagaaa 29220
attctagaac accaggaact ctcaaaacta gatatttcaa aactcttaaa gaccttaaag 29280
agtaaatgtt ttcattgtcg atttaacata gagttacatt aagcagctaa cactttccct 29340
ttcttgaata agatttcctg tctgtcacgt tgccatttgc tttcttcatg tttttgcgat 29400
ggactgcagc tccctccatt ctggggagcc tcctggcgct gcagcaatcc agcatgactc 29460
ggagctcttt gattttcttt cccagttact ttatagcaca tgaagatgtg ttcttaccag 29520
tgacagaggg tcggtgagaa tgaccatttt tgttttccgt atatctgtac ctgccacatc 29580
catacctttc tcagaaggtc ctggaatgac tcgtttctct ctctgcctct ctgggtattt 29640
ctccaaccac aggtttgcat ccccaggggg aagccagctc tctggtccct catgctaagc 29700
tttttaagca gatagtactg ccaggcggtc tttaaaccca aggaggcttg ccccttccca 29760
agacttcaag gagttctaga agagactgtg atattcaggc caggtccctg tttgatgaac 29820
agggacactc aattcctggc aagtggggtg agcgcctcca gccctcccca cccccatacc 29880
ggtgtgctgg cccagaccca gggcatattc aggtacttaa agtagcaaat gtctctgctg 29940
taaaaaccct cactccggta ctgaaagccc agagcccagg ctcaggccac agaggtctga 30000
gatatactct caaggaggtt agcccataaa agaaacaggt cataggactg catgttgggt 30060

ttgagcctga agaaaggtgc ccatggttgt catcttctgt ggctgcctgg caggtaacca 30120
gatgtgcttg gctctcttag cttttggctg tgctatctgt ggggtagtgt ttctgatctg 30180
tcttcactgc cactcccagc tctctgaggc tttgtggctt tttcttggtg gttgggcagg 30240
aagcctctag agcctgaagg aattgctgtg cttgatgaca ggcacaggct atcaatggct 30300
ataaatcgcc tagtggctgc ttcacgtatt gaagaagaac atgtttgctg tctgttctgc 30360
ggatgcttct ctgatggccg gaacacagct gcgaaaagat ttcgtagagt gactcagagc 30420
aagcgcccag ctcatgccca ctgaattaag caagaggaag tggccaactt ccgcagctgc 30480
tctgaaagcc caacacagca aggcctggct gagatgaaca acatagatca ttccactgac 30540
tttgggctac ccccaagcca accccatgtg accccacacc taccccaaag ctaggtgaga 30600
cccagggtcc accctccaag cccgggttac cagtaggggg taggtgccaa actggagagt 30660
agactgtgat gaatgggtag cagagatggc agaggacatg gctcatcacc tggggtcggg 30720
gaccccgctc tcagcagctc ccttccctga gtgccctggc attggtgtgt ctgtgtgttc 30780
gcgagccctg gcatgccact gcggcttcac agtagcctcc tgggcagcgg ctcatcagct 30840
tccagcacag cctttgttgt tctataaatc tgttaatgtt tgtgctacct agaataagaa 30900
ggaaggagtc attctacaga gaggatttat tcttccaggc gccaaaacct tgttccttac 30960
gattatgtcc tgttctttaa tggggtcccc tgtactccac agtgtcattc gcctccacac 31020
tagatgtcca cacaatgctg tgtattttca ctgattttgc tggggccctg ccctgtcttt 31080
gtctctgcct ttacagtcag ggccagttgt cacttctccg tggctgtccg gagaacctgt 31140
agcaccctct ccagccactc caagcatgag gctttgtggg gagcgtggaa tctgtgagga 31200
agccgaggca agctgttagg attctgttca atgggaggaa aggctctgag tgaggtggga 31260
aggaaggact tcccaggagg cacacttggg ttcccggccc cacctctgcg ctggctgccc 31320
acaggccctg cttctgccta tttcctggtt ctgcttcatg tttcaaagac ataagatcaa 31380
atgtgattaa gttttaggta agcaagatat tgtgcttatt attgaattgt tcttctttag 31440
tttaacagcc ctccagttta atctaaatct gtttcctgtc attaagtctt tggtgtagat 31500
aaaagatcag ttagctggtc gctatctttt gtgtcataaa tcttctagga aaccattgtt 31560
gtgatttttc attgtaccgt tcctgaagag gaaggaactt ttcattcctt tgggcttttt 31620
tcctggtgaa tttcccagct gttagtgtca tcgagcttaa ctctcacatc cttaaggcag 31680
cattagcctc agaaccacca gtacctcgct gtgtgccctg ggaggcaggt tattaccctt 31740
ggcttcatga cccatggaca gtccttgcaa tggaagggaa acacatttgt gggtagagtg 31800
tggagaatgt gtgtgaaagg ctttcctcgc ccaggcagta agtgctgcgg aaacaagcca 31860
ctttttatgc taataagatt tggacagggg ttgggaggta ggggagtgag tgtgtgttga 31920
tctgattccc tgtgcccaag agcaaggaca gtcacttcat cccagcccct gcacagtgtt 31980
gggaacacag aggtgttcag cagatgctgg acaaatgtct cctgggagta tgcagtattt 32040
gctctttttt cctctcatgt tctgtgttcc taacattctt ctattttggc ggggtgggga 32100
ggtagaaggt aggcagagtc tcactctgtt gcccaggctg gagtacagtg gcccgatctc 32160
tgctcactgt aacctctgct tgccgggttc aagcgattca tgtgcctcag cctcccgggt 32220
agctgggatt acaggtgccc tccaccacgc ctggctaatt tttgtatttt tagtagagat 32280
ggggtttcac tatgttggcc agcctggtct cgaattcctg gcctcaaggg atctgctcac 32340
ctcagcctcc caaagtgctg ggattacagg tgtgagccac cactcctagc ctcttctatt 32400
ttttaattac acctctaatt gtctctgaat tgtcactgaa ttaattgtct ccttaattca 32460
gtgcagaagg ttttcataat aacactaata tttatggaat agttaacaat aggtcagagc 32520
ttataatgtt aaataagata acaaagttta tctcatttaa tcctcactag aataaccctg 32580
cgaggtaggt agaagaagtt agagaggtta agtagtctgc ctaaggttac ccaggttgtg 32640
tgtggttgac agtgccctac ctttcccccc tgactttagc aatacaagaa tactggcaag 32700
ttgctgctgc cctctgggct ctgttataaa gtgaagctgc cgatccacaa tggagaaccc 32760
actcctgcaa ggccaggcct ccacagaggc cagaggccag aggccagtag tggtcggggt 32820
gcccaggaag ctgggctcaa acaagggtaa cttgcaagaa tcttcaggaa gcccttatat 32880
tcagaattgt gttctgtgcc acatgggccc tttcccacca tcaaacttag aaaacgaccc 32940
ctaggaaagt cctcagagtt catggaaggg cgctgagaag tctgcccaca ccctcgtggg 33000
ttggaggacc agtttcgcca agtgttctct ggcccagttg taaacatcat tcgtttgctt 33060
gtccagcaaa cattattgga cgcctattag tgccaggtac tgcactgagc acaagagaag 33120
ggcccagttc cttcccttga agcccacagc ccatcgagga agacaggtat gtaagacagc 33180
atttgcaagg gggtgacaaa ggccaggggg gaggtgaaca aaggatgcag ggagtggctc 33240
tcagtgttgt gagcaccccg catgggaagg ccagcgcggc agggtgctgg gtgctgttgc 33300
cctctgcttc tcccggctgg agtgtcagtg tgggaccctg taggccccaa cccaccccag 33360
gggaggcaag tgagaaggtg acaggacaga gtcatgggac aagaaccaga gggaagaggc 33420
ctggccaagc cctggagaac tgagcagagc agagagccgc ctcaccaagc ctctgtgttc 33480
catcttgtca tgcttgttgg aatgaggagg aatccctaaa gatcatggat agaaggagaa 33540
tggctcttct tcccaccacc tccccaccgt ctctccctga aaccccagga gcattccaga 33600
tacaacacag ggcgggggtc ttcccttcat gttccttgag tgcagtggcc atggccactc 33660
ctttctcaga actcctactg ccagtcttag cactgctggc ctccataccc agcagggagg 33720
tgtggtctgc tcccacatgg ctggctgggc cattcctggg cagatggtat cgagtaagga 33780
gcacccagtg tcttgtgtgg ttggcacaca agacactgtg gtggttgaga gaagcagagg 33840

gcaacagcac ccagcaccct accacactgg ccttcccatg tggggtgcac acgacactgt 33900
gtggttggca cacagtggac acaccctgga ctgcatgcta cgtataagca tgtcctggtg 33960
aaactagcag ccagttcttt gttttgttgc aaatgaccat ttgacagtac ttccacaaca 34020
gccaaacatg gcacatgagg aactgggctt gagtatcaca aagatttact ggtaaatgga 34080
caggcataag caccattaat cagacagcac agttactctc catcttggtg gctgcacagc 34140
tcagcggacc acacagggcc ctcctggggt gttgggcaag gcctcctccc aggcagaggc 34200
agctggactg aggccagaga gttctgggtg ctacagcctc taccaggaac aacaattctc 34260
acccagggga ggcctgaagg ctgcctgggc ttggctgcct gggcttggcc taacctacct 34320
gtgaagaagc tcccagattg ctagtcagca tcccaggtac caggagagct ttcttaatgc 34380
atctgaaaat cctggataaa cagggctgcc ctctgcaacc caggctgccc tacaagatgg 34440
gcttggcctc cagagtggta gctcagggaa gcagagccct caggtccagt cacgctttgg 34500
catggtctgg cctcaccatc tgacttacga ttgacccagc ctgcctgaaa ggactcaggg 34560
cctaatccag gttgttctgg tcttggttct caggtagaat gagagtggcg tcggggaaag 34620
ggctgaagtc ttcacacagg ctgtgcgaga gcactcagca gtctttggtt gactttgggt 34680
aggagtggag atgaaaccca gcagtcttat ggttttcccg gccttccacc ccacccaccc 34740
taccccttcc tgtggacaaa gagagggcag agctggggcc tcagtgccac gtggggtggg 34800
cacatgaaga tgtcagggaa gcccagaatg ttctgggggg ggtgggggac acattcattg 34860
aaaccgctct gaacctaggt cataaaactg tgtgtcaata ttttaaaagt cacagaatga 34920
atgcagagct ctgccaaact caacatgctg tgttccaggg ggtgataaga cgagcgttag 34980
ttcagtggaa aaaaaaacaa gacaaaagga gttttctttt aatcttctgt gtttcatgtt 35040
tatactgagg caggctgccc ttgcaggaga gaattcattc atcatgcaac caacagatga 35100
gtcccagtga cattgtcacc tgtcacctgt gttggattta agtgataacc atatacaggc 35160
agtaagaatg tatcgaggca aatgtagcct gtcccattag gccagcagaa gccatcttgg 35220
gtttcttctg ccaagttcat acacctctgg ttcaacagtg ataagctgaa gggaagttgc 35280
aggagccata actgccactc ctagtccttt attactaggg ggctgtgctt ccacccctga 35340
aaataagtct tgtttggcac tcaacgtttt ctgtggagca aacaagcaag tcatgtctct 35400
gaaatacctc atttgttccc ccaaacattt caccagctcc tccatgtgct gctcagctct 35460
gggatacata gatgggcacg gctaggtgtt cccctccctt ccccacccaa cagcctatgg 35520
tctgcagagg aaaactagcc tccagagaag gacagtctgg attcactgtt gagatgtggt 35580
ttagaatcag cccacaggac catggagcca gggagggaga tgtgtgaact gaacctgtac 35640
agccccacga gttgctgagt ggagaaggtg ggcttgggtg cggggagcag agggggcaga 35700
gtggaaatcc agggtggcct aagagtctgg gtgcctgtca cccatgagga ggccccaaag 35760
agtcccttgg gaacagaggc actgatctcc ttgtggccag taagtgagca gggctgaggc 35820
aaggaacagg ccagcaaaag cctgcggggg gccagggagt gtgacaacca aggacccca 35880
gagcactagc agctaaggac ctcatgccac actcagacct gggcgaggga ctgacctgga 35940
gacctcctga gctttctctg actgtatgga gctcaccagg gaaaacatgg gggatgcctg 36000
gatgcattgc ccagctccga gctcagcaca aaaactccct cttggaacag tctagaaaga 36060
ggctcacctg aggcccagct gtcacccagg ggccatgatg tcatgtgggc caaggcatct 36120
gaggggcagg ggccttccgc atcccactgc tgccgtggcc cgtggcccac tctgccctgc 36180
cctcctgacc cggaggccca gtgcgtctct gtgggggggtg ggaggagcgt cagcaaagga 36240
gaggctgcac agggcgcctt cggcagtgac gcgaaaccaa gagcaggaaa agcaaccctg 36300
ctcagccctg ggcgactcag acaggaaagg gcctgagcct gaggcaacca ggaggggca 36360
gccttatcag ggaggccgtg gcgcgggcct gagtgctgct tctgccctca tccaactgca 36420
gcgggacaga ggcaaacaag aggccccccc tttgtttcca gggggggcctg gaaacaaggc 36480
ttccaaggtg gcaacagtgt cccagcccag ccaggcggtg gctgcagggg gccatgtgtg 36540
tgcgcctgtg cctgtgacca gcctcagggc ctaggggcag ggagcaggcc aggggaaagg 36600
ctctgtccct ggggcttggc cgggcaggtg gaaagccagg ttcagatggg tgaccctggg 36660
ctctgcagct gctgtggtct ggcagagggg aggaggcgcc cttagcagtc aggggcagga 36720
tgatggtagt gacgtagctg actacggggg tgcctgaccc ctgggcagca atgtgctctc 36780
agggtgggct ctgtattgag ttcccactgt cagcacagcc tttggctgct gcctcctcct 36840
cagagggttc agagcaaatg atgcagggtc acctgaggac aaagcatgga tggggtgtca 36900
gggaccctgg gtctgggagc ttgggcaagc ccttcgagct cactgagctc cctgtgctcc 36960
tgccaggcat gagaactctg acttctgaga ctcagatgga ccgagagtgg caaagtgcct 37020
ggcagtctcc acatccagcc ctgccacact gtggcatggg acctctgtgg tcacttctgt 37080
ggcctcccag agacaccatc tccctctgtc accttaggac cacagtcccc tccccatgca 37140
ctgggtgtgg gggaccagtg aggagtggat gaggaagtgc agagaccact ctacgcttgt 37200
ttccctgcag actttagtgg ctgtgtggct ggggtggtgg ccctgctgaa ggggatctga 37260
cctggcagcc gtttgggcag gagcagtttt cagatgtgag cacacgttca aacttgcagc 37320
agcaaagctg ctcaaggtcc caggaagccc aggcttctct ctcgtttttg tggctgcctt 37380
ggtaacgtgt gggtgtaaga gcgtgtgtat gtgcaggaga gagacggaga gaaagaaaga 37440
cctgtgcatt ccagaacacc cttcttcctt gaacatccga ttacccagag cctaatttta 37500
aaaccgaagt cgatgccttc ttaagtctgc gatggcccag ctggcctcct taagtctgtg 37560
atggcccagt tctgttcttg ctccaagtct acgaagccag cttcccctgc tggggcttga 37620

aagggacccc tggccaggag caagcagggc agcaagcaaa gctgttgggg gcactgtggg 37680
gactccccca ggtggccagg cttctgtgtg cccgtgccac ccctcctcag gaccttgttt 37740
ccagttccgg ttgggcaggg gctggcactg gagagaggct tatgtgtcaa caccataaag 37800
cagccagcaa gccctaatga ccacgctctg caagaccaca cagcacagac tggcacctgg 37860
ttctgcttgg gggcagggcc gctgccagcc tgcaggccgc ccctacctct gggagcagag 37920
cccgaacttg gggagcgaat gaggcttctg ggctggcttt atgctgacaa gggccttctg 37980
cactgtcagc ccggccccag ctcccagcaa gtctccttte gctccccatt acggccactg 38040
gggctccctt tggcaaggcc tgagggccca aatgtggcca tctagcctct ggggacttcc 38100
ttcctttgga gctagaaaaa caggtgcaga atgtgtctgg ctacagcagg ggcccgccca 38160
ctcacctata gaaaggccct gccatggact gagcctccca gcctaggaaa cctggctctg 38220
gcctcccctg caggcatatg atgtttggct ccagaggcct tctcctctgg gcttttccat 38280
gcctgtgaac tgggccccat tcatttctct gtggtttcat gggaacgtcc aatgcattca 38340
ggaggttgca gtgcgcgcag gaggagaggg gtcagcgaga ggcccgagct gtgactggtg 38400
ggccacccag aggccacggc accctctgct ggagactggc agcagggtgc atggccagct 38460
gtgggtgggg gtccatcagt caagcagctg cactttctcc ccatcccccc ccccgaccca 38520
ggcaaggtgc tctgcctgcg gctccctttc tccaggcctc cactttccag ctcccaggca 38580
cccagcccca cccggcctgg cctggaacag agctgccacc aagatctctt ccactttccc 38640
tccccagcag cctgcaattc agtgctccgt agacccctgc ctcccagggc tctgcggttt 38700
ccaccacact acactcaatt tccagctgct aagaacacag caggttctac gtaaaggtgg 38760
ccatcacctg caccccatgg gttgcccagc catggagaag aggccatggt tgggtacaca 38820
gcttctgaga caggcccagc agctgccttc atggcctcgg cagagcccag ggctctggag 38880
cttacaggca gcgtgtgccc aagtgtggaa aatttggtct gcagaagaaa tgaggctgaa 38940
attggctggg agcaattctt atcaaagcca cgttagcagt tttcagcaag agctaattga 39000
acaagctctg tgagtggcct cattccatta gcaggagcct cccacagagc gtgacaaggg 39060
ccctggtggc tgagggcaga agaggctgtt tctgtcccac atttgccttt ggcctttgaa 39120
aatggactaa ttttcagctt tgggcactgg tcctgcccct ctgccccggc tcccgctcat 39180
ttccaaggcc actctctgag tgtcctgtgt gaggaagggg tgaggtgagt ttgtcagcac 39240
tttatcaggt gcatggatct gaaatgggac acctctggcc tccttgccag agggtggctt 39300
tgtggtgagg gtaggggagg cagaagaaac ttctagaaat gttgctttta ctgtgttttt 39360
tgcccaagtc ctagagttgg ggcacccagg ccagtcacat cataagatgt gtaataataa 39420
tgtcttattt attcgaggcc aggaacttga acattgcttc cctgttttac agggaaacaa 39480
attgagatta catgagctta agaagcaagt gagtggtagg gctggcattc catgcaagcc 39540
actgaggaga agccccttgt ctccatggca gggccaggag aggggaggga cacccccaa 39600
cccctaccac ctgccagaca ggaccttcct ggccacagat gccctggatc cctgactatc 39660
aaaacccagc cccagccttt cagctgagca gagaaatact cagatccagt tcctcgatgg 39720
tcagggaagg caggcttcct ctgaagagca gatcgcttta ccccttttctc atctcatcac 39780
ctctgagccc tgccagggtg agagcagcct ttcccagcat cgtcctttaa gatgcgacag 39840
aaacaggtcc cacctgagcc agcaggaatg cggcacccag tggctggctc tgcagtcttg 39900
atgctcgccg gcaccttcag ggtgaaggac gccctgtcgt aaacgcatga agagccctgc 39960
gtttcatata ttgatgttgt tgctttttct ttagaggaac gtttgtgcac tgtgggaacc 40020
tctgtctcta ccagtgtcac ccttgctgtg gggagtgtgt accgtgtgcg gggggctggt 40080
ggcctttctc tgctgtctgc cacagtttgt gaggggctcg ctgagcctca tacctgagcc 40140
tccccctccc caccccctcc tgccccaggg aggcccagaa ccagggagga gaggtgctgg 40200
gagtgagtgc cgaggagctg gggtcctggc cctgcagcca ctgtcacagc acagccccac 40260
cccagacctc cagagtggtg gggccctggt ggtgcaggtt ccagacgctt ggctgatgcc 40320
aggcctggat ccaaggcccc cgtctccgag gccttagctt gctgttctgg aaggtgatgc 40380
tggctggcag ccattcccag cccctcggaa agcagttgtc aggcagtccc tgagctccag 40440
cgccccatcc cccgcagggc ccagtgatct cacgcctgtg cccctggtgc tgggaggagt 40500
ggggtgacac tagggccagt gcccacatca gaggaggaag gtatgaggcc agggcagggg 40560
gcagggcgcc ctcccgtcca gcagccccag tgcccactct gcgcccttcg gggctcccgt 40620
ggcccagagt gtggagcggc tcaacctgac cacccaggat agcttggggg cgtttcggag 40680
gtttggctgc ctaggctgtg cacctagcac agctccccag gagagggagg gaggaggtca 40740
ggggagaggg ccctgctgac cgggtcatct ctggccctgg gttcccatag gagcgcctag 40800
gctctaagct ggagcctccc catcccagga ccttggggag aaagaggctg ggcgccacct 40860
gctggcccac cagggaattg acagggtggg ggactgtgga gcctgtgctg gccgcagatg 40920
agagccctga ctcccacctt ccctacccca cccaccctgc accgtccagc tcagttctct 40980
gacccgtggt gccaggtccc atttgcaatg gcgaatactg aactcggtgc aactctggct 41040
gctggcagct gggcttggcc tgcacctttc tgtccccaaa ctccactggg gacccacctt 41100
ccagccaccc cagggtgcca ccgccagagc caggggtcag ccccaccttc attcactcct 41160
actcatagcc tacctgttca ctctgccccc atctgctact tgcagcatca gaaggacatg 41220
agggcaccaa acagcccctg cagctgtcct caaacatcat ggccaaggct gcacctggga 41280
agtggacttt ctgtggtgct agctccctcc tcagtgccct tgacctttgt ctgggtccct 41340
gcttaatgtg gcctaactag ttgggccaga gctccacagg tgctgtcctg actcccagcc 41400

ccaggaggga gggagaggct gagacggcaa gggaagcaga gactcagcca caccaagggc 41460
cctggcaagg tgggcctctc ctccatagcc tcaccaggct tcacgttcaa ggtcaccaag 41520
agtgcacttg ttcactgtcg agggcagagg tgactcctgg gactgtgctg ggggtccagg 41580
gagagcaggt agcggagttg ccagggaagc agcttgcctg aggtctgtgg tcttggcagg 41640
ggcttccaca gcggccccac cctctccctg tcccctccct cctgtccttg tcctcgtgtt 41700
tactgaaaac catgagaagg gatgtggaga gcgcctgcag gaactgagag caggagcctg 41760
gctcagccct gagaggcccc cagatattca attcctaaac ccatagaggg tggggcatgg 41820
gcacagagga gtaaccaggg gccacctcac acagccctgc tctttcaccc tgcccgcctg 41880
gtggcctcct tagcctgcag cctcagtgct gcccgctatg gggtcatgct gcctcctgct 41940
ggccacactg caaaatgcag cccagggtcg ggcctaaggc tacacttgtc cctcttccgg 42000
caagcctgca gctgggctgg aggggaaagc aggcaccaca gaattgcctg gatgctcctg 42060
cccaggagga ttgtccgact gcatggggag aaaagtccag aaccgtgcct ggcacatagt 42120
agtttttatg gagtgagagg gcaaaagtac gcatgattgt gtgcatctga agtatttccg 42180
tgctgatggc ctgaccagta tcagattatt tttcaagcag gaattttgat tcctcttggg 42240
ttcacaatat cttattatga aatccgaata agaacagtct aatggcacca gacagtgata 42300
caggtgagcc tagaacagtc agtgttcatg tgggggactg cagcctgctt ttcagggagg 42360
cttcaaaaga attgaggaac acagattgat ggcagggatg aaaatcacag ggcatattga 42420
ggagaccccc agctggccat gtgggggggca ggtggggcaa caggagaaca gtgcctgcgt 42480
cctgagggct ttcaatgcat caggcagagg gcctgccagt gcagaacctg ttttctctgc 42540
gtccatgaca gccctgagca ggtgccattg tgaccctgt cctgcatttg agacagagga 42600
tggggagggc tctgtgattt gttcagaatc ccacggcaag aaagttgtgg agctgagagt 42660
caaacctggg cttgggagac ttgtagtggg ttaagggctt gaacacaggg tttttggcag 42720
gaagtggtgg gcacaagcac agattagggc tgggaggtgg ggtggcacat cacaggccgt 42780
tactgccacc cagagggcaa catggatgct cctcctttta cctgctgggt gtcctgtgtg 42840
gtagaagggc aggctgaagc ttgatccttg tggtcacaca tcccagctgt cacctgcctt 42900
actgtgtgcc atgagccagc ccaaaaaagt ccccactagt ccccagggga ggcgctaggg 42960
gtgctgggct ggcttccctc ctctccaggt ggtgcctgcc ctcctggggc atttcccagc 43020
ccttcttcct ctgcatctca ggctccctgg ggaggcagat atgctctcag gacatcctgg 43080
cagagcacag ccacacgtct gccctggcag gcccaccctg ggtggaggag gggctctata 43140
tgccagggct ctctctctcg gtggctggct ttctttccac gagcatggcc agatgacgag 43200
gctcacccgc agcactactc acacctccag gaagggaagt tgatggcagg gttctggctg 43260
cagccaggcc tgcgggagct tcctccctga tctctctcac tcaaggggaa agctcagggc 43320
tgggcatgaa ggctggggaa aggcagggaa ggcagagtcc ccccaggctg gtcaaggccc 43380
cgatagcccc atgtctccct gaggggcgg ctttccccat gaagagggtc ctggtcacca 43440
aggcatgagg acatgcccaa ggctggccca tcacaacagg ctccagctct tgtgcacatg 43500
tgtgatcttc ttgtcccacc aaaggcggga aaaagaagtg cgtggcctcc tgccccagat 43560
ttggtggtag ggtcagtggt gctgacctca gtgctgtgtg ataccagccc cccagccttt 43620
gcctggttca tgtcccacat cgcctatcgg tccccgctcc ttcagtctgg gaccttggcc 43680
tgctcagtcc ttctgtgggg agccacatcc attcacagtg actgttgagt ctaatgacag 43740
acacccaagt gctgcaaagc cagagcagca gcccctgaaa gggtgactct ggggtctcac 43800
cccatcccca ctcctgccct gtcctctggt gagggcttcc ctcctgctgc ctcagactgt 43860
cctgtctacc ctcagagacc ctgttgggag gcttccctcc aacaaggcac cgtccccaga 43920
ggagaaggga gcccagcact cctgggactg tggggtcctt ggtccactca ccactgccac 43980
atgcctcagg gagccctcag agcaggggct gagctggggc cccagggttc ccatgccctg 44040
ggcgagcatg gtgccctctt acagcctggg ctgcccgagt gttccaggca tcctgtcatt 44100
cagcagagat ctttcctcgg tgccttctct ggattgggtg ggctgctgag ctctggggct 44160
gctgcagtga attatttaat agatgggtgc ttccctgctc tccagggtcc ccctctggga 44220
gagccagcac aggagctaac cagtcagagg agaaggcggt gtagaccaac tggtgcaggg 44280
agaccatggg ggtgctgggc aagacaggga cttggcggaa cacatgagat gaggtagctg 44340
ggaggttgtc tttaagctga gacctgaagg gtgattgata gagagccagg ccggctgcag 44400
cgtgggaaag cctgcgcacc tgtccccaaa ccccagcggt ccctcccatc ccacccaccc 44460
tctgcaggct cgtggaggag ttcatgctct tggccaacat ggcagtggcc cacaagatcc 44520
accgcgcctt ccccgagcag gccctgctgc gccggcaccc cccgccccaa acaaggatgc 44580
tcagtgacct ggtggaattc tgcgaccaga tggggctgcc cgtggacttc agctccgcag 44640
gagccctcaa tgtgagtggt gggcaggatt cgggggaggc cctgcttggg ggaaagaaga 44700
gaaagacctg gaaggtgggg tggtccagcg gcctctgctt ccccccagag tccctccct 44760
tcagccaggt ctctcctgta gggaaggagg ccctgggaga aagggcccct ctgagtcaca 44820
ggggccctga cagtgggacc tgccccttca ccaggactgt gccaagcggg gggaccctgg 44880
aggcctagca gagggcaggg gtcctgtggc cagaaagggc tggtcttggg cccagaggct 44940
ttcagagtcg gggctggaat tgtaggaatc ccgggaatgt tcctggtggg tactttcagg 45000
tgctccctgc ctggggcaaa gctaagaaac ccagggcctt ggctgtggtc ctggaggagg 45060
gagacatctc acccaggccc aaccctggga ggggaaggca ggtgccccag gccagagagc 45120
tggagcccag tgagtccagg ccagccagca aaaacatgga agtgtgggcc acagggtgtg 45180

ggcggctgcc ccctctcccc acccatcccc tctgagcagg gctgagcccc acaggcaact 45240
cctccccccа gagccgggca tgaggtgctc agcggatgac agggcccaga gtctctgccc 45300
gagctggacc acacgtcaca taggtttctg ggatttgctt ctagaaaagc ctgacccaaa 45360
catttggaga tgacaagtac tcactggccc gcaaggaggt gctcaccaac atgtgctccc 45420
ggcccatgca ggtaaggagg gcccagcccc ggcctcccct gctcccagga gcacactagc 45480
cccagacctg tgacctccac gtgcaagcac aggcccccac cgttcctgcc tgctctggac 45540
atggctgggt ggacgggggc tgctcctcct ctgccagagg gtgggagagg aggccgaccc 45600
caggcagcac ctaggagggg gcaccctgag cctcttgagt ttgagccgct gtctcctgct 45660
cacactcgct caaggacaga gtgccctgga gctgaggggc tactgagacc tcctgtcagg 45720
ctggggtcct ggaggagaga cagggtccca tgtggtttcc tgtcccaggg aacactccgc 45780
agcctccatc cccacatgtg gagtccagaa ctagctgtca gcctctggcc agtgtgggaa 45840
agaagcggac ttggccgggg gcctaggcct gggcctgcag ggaggtggca gcctgtgggg 45900
tggacagctg ggcttgctct gggatgcctg tcacagcgcc ccaggctgag cttcccccat 45960
gcagggcccg agcatcctgg gaccaggacc ccagaggacc ctcgggtcag cgggagcagt 46020
ggatgctgat gggtcggctc tgggtcccac cccggcccag gggcagagac aggctgtatt 46080
ttaggggctc ggtcactcgg cagattcaat ctgttcacaa gaactgatgg cttcagctga 46140
cctcagtgga tttatttttct gacacttcaa gctctgctgg gtttgaagcc atcagggcct 46200
gcttgggcct ggtcaccgtg acctgccccc agtcacaagt gtctgcccag ccaagcacct 46260
gtggcaccca cagcggagag gggctgggcc gtgcccactg ggctctctct gttctacact 46320
gcagcggctc taggcctggc agagaaggca cagcagcccc tgagtcccag aactgcctct 46380
ggctctgccc tgctggggcc cctcccatgt ccctgcctct gacgccatca cctccaagga 46440
ggtacaagcc aagctggagc tccagagatc ggagccgctc cggagttagc cagagcccga 46500
aaagcctgca ttctcctggc tcgcctccca gggagctcag aggtgccctt gcccgggaat 46560
ccgatggcag agagttacca ggtctgcggt gctcctgttc ctcagccccg ggaactgggg 46620
tggggacagg gcagggcagc agcagagagc acagaaaggt gtgagggggc acacagtccc 46680
cagtgagcat ctgcatcagg acaccagggc tgtccgaggg ctgtcccagg gatggctggg 46740
cctgtgggaa agccatggtc cccacccatc ccacccgacc ctgagccacc tccaccagcc 46800
aagaggggcc agggcccttc atcaacctca cccaggtcat ctggggaact gggccaccac 46860
tgagaacaaa gcccagacat gtctgggagt ggaggctgtg cccacctccc ccagagactt 46920
gcccccgact taacccaggg cccagcaggg gctggaaggg aagtggagtt agggagcgga 46980
gcaggtcacc atcagctgcg ccctggattc cagggcccgt gtgcacagag taacgggagc 47040
cggctgtctg tctggccaag ggcacaggag ggtgagtgtg tacagcagcc agggagcaag 47100
ggagccagag agacatacag gcgtgacctt ggacctctgc gaggaacccg ttcactcgct 47160
cccaggcagt agcactggcc ctgacaccca gccctgaaag ctcggggact gcaggacaaa 47220
cagcttcagg ggctgtggcc ccagctggga cgggctatgc gctggtccct agagactctc 47280
ggtatctccc cctgccccag tcctgcctcc tgcccagcac aagggccttt ggaactcagc 47340
cctctgtgtc tcagcccccg ggagggtcag gtgtcagaga cgagaagggc cgaggctggc 47400
aggccggaaa ctgcctccct tgactgctgt ggggtggagt attggcgagc acagaggtgc 47460
ccgggtgaag cgtggcttca gctgggcggg atcagtgcca gaggggatga ggacggcccc 47520
gaccaaaggt gggcctaggc tggagaggaa gctccaagag cctgaggccc gtattgcaca 47580
gggcagggga tcgcatcctg ggctttctct ccctcctccc actctggcca gatgggagga 47640
tggacgttgc ctccttgaac aaagacccac aggctccttg gcttctgctt gtgtctccag 47700
cagacagcgt ctgcagcccc tggtccaaca aaaccgcagg cggcctcctc ctcttcctcc 47760
tcctcattgt cctcctcgac caccaccacc tcctccttcc accacctcct ccttctcctc 47820
ctccgctgtc gcctcctcct cctcctcctc ctcctcctcc tcctccgctg tcgccgcctc 47880
ctcctcctcc tcctcctcct ccgctgtcgc ctcctcctcc tcctctgcct ccacctctgc 47940
catcgccacc tcctcctcct cctcccccac cccccgccgc taccttttctt tcttcttcct 48000
tcttcctggg cgagagtagc agccccggcc ccatgctggg gaagggtagg ccagagactc 48060
ttcctcctg gtggtgctca gcagtgactc agcagggact ggacttcgga ggctcagctc 48120
gtgcccccta ccctgacagc atcctggggg ttcctggctc cctggtcctc agcagggtgg 48180
gcttgtccag gccattctca gtgctgccac cttgagggca tctgggaggc ccaggcaggc 48240
cagatttgtc tcctggaaag gacatgggta cccctgggct ctgcccagcc tcctggcctc 48300
cccctggggc cccttgtgca gcaagggccc tggccccagt cctccctggc gtcactcagc 48360
aaccagcagc ccattaggtc tgtccacaca tcgctgccga cggtgaggct gtgggtggtg 48420
ccagccttcc aggcctggct gggcagctct gggcttgtca ggctctgacc catcccgtcc 48480
cgcagatggc actgtacttc tgctcggggc tgctgcagga cccagcgcag ttccggcact 48540
acgcgctcaa tgtgcccctg tacacacact tcacctcgcc catccgccgc tttgccgacg 48600
tcctggtgca ccgcctcctg gctgccgcgt taggtgaggg gtgcagtcgg ggtcagggca 48660
gacctgggcc agctcagggc tgcccacccc cacagtgggt gctcagtggc ccaagaccat 48720
tctgccgtga cagcggaggt ccaagggtcg ggcgacccaa gtgcagggga gcctggcctg 48780
gaaactctcc ctacgggccg gtgctgcaga agctgcatgg agcccacagc cagccctgga 48840
cacagccggg aggagggcgc tgacctcgaa gggccgcttt ctgctgccct gggagctggg 48900
tgcttggggt cctaatctgt cggcgggggt gcagcgccat gcagcccatc ccccagccat 48960

agctcttccc agccccccag gctcccactc tcatgcctca ccccctcttc ccaggctata 49020
gggagcgact agacatggcg cccgataccc tgcagaaaca ggcggaccac tgtaacgacc 49080
gccgcatggc gtccaagcgc gtgcaggagc tcagtaccag tctcttcttt gctgttctgg 49140
tcaaggtgag ccctccagcc tggtgcccct cacctccctc tggctcccga ccctcctggg 49200
cacctgctca ccaggaggcc tcgaggagcc cagggcagtg ccaggaggtg ccatggctgc 49260
agcactgtcc ctgcaggaga gtggcccccc ggagtcagaa gccatggtga tgggcatcct 49320
gaagcaagcc ttcgacgtgc tggtgctgcg ctacggcgtg cagaagcgca tctactgcaa 49380
cgtgagtgcc ctgggagagc ccgggggcgg gcagggcagc ccaagccatc ccgcactgga 49440
ggggcacagg ctgtgatggg tcacactcca cccctcgctc ccccagccct agcacaaagc 49500
ccacctgatg ggccttgctg agacgcccag ctctcccacc tgggatggtg gctccaggcc 49560
cagggtcagg cctggccccc ttccccaagg acccaggaac cagagagcag gcccctccat 49620
ggccagtaca gctcggcagg gtgtgcaggc tttggggact gtgtttatag gaacgtgaag 49680
gaatgaaagg ccagcgaatg gtccgtggcc gctttggaaa ctgtgtcccc tgaagacaag 49740
gaagagagct gtccctggct cggctcctgc cctgagtgac tgttgactca cagttctctc 49800
tccaagggga catgggcctg tcctaatgct gccttagggg cttggctcca gctggccctg 49860
gggtctgcag gtcaccacct gcctctgtgc ctggctttga atttcctaac atccagagtg 49920
ccctgggagt acagtgtcca gcccgttgtg tgcagtaaac gtggtgttca taaccgggag 49980
ctgggcagaa gaggaacga 49999

<210> 17
<211> 49999
<212> DNA
<213> Homo sapiens

<400> 17
cagagtcccc ctgcggaccc tgggggctct gtatcctgaa gttcaagcct agctcaccct 60
gctgtgggcc cagccctgcc tgcactgaca gatggcacca gcaggggcg cagcgctccg 120
ccgccacagt tctctgtccc cacctcagtg cagtcagccc tggacccccc accacttgcc 180
ccccatagca cacagagcca cgggccttcc cagcccccac ccctggccct tggtcactct 240
cacctgctgc ctcagctgaa ggtggcctgg cagggcctcc ctgaagctcc ctccagccag 300
gcaagggtgg gccagggccg agggctgagg gccgcctcca agcattgaag ccctccaggg 360
tggaagggca ggcagcagca tccagagctg aggcctgagg cttggtgttt gcactccagg 420
cactggccct gcggtcccac cacttccaga aggtgggcaa gaagccggaa ctcacgctgg 480
tctgggagcc tgaggacatg gagcaggagc cagcacagca ggtcagaacc cctctgtgtc 540
ccagcccccc aagtcctgat gacccctctc ctgcctcctg cggtgccccc cattccttca 600
tctgtgtccc ctgggctccc ccagcactgc agcctcccgg gtggggtttt agggccctcc 660
cagctcaccc agacccccctc ctgtgggtcc tgctttctgg caccaccttc ccttccttgg 720
gggcaaccac agtggagaga ggaggggctc tgcctgtccc gctaatgcag gggtgctggc 780
cttctagggt cctttagaga acctgatgaa agctatgagt ttacacccaa gaaattgtct 840
ggaaccgttt tcaccaacag tgtgccctga acgcggaccc aggccctcag gttgtgtttc 900
ataagccttg ggagcgctca ggatgcatct gactccccaa ctctgccctg acccagggca 960
ttcttcctgg agggggcccc cattacagac aggcgagcag aggcttccag aggccgaagg 1020
aggggccagg ggtcctgctg cagggatgga ggcagagctg cgcctcgaca tcaggccctg 1080
ccatccttgt cccctcacgg ctgggctctg cacaggtcat caccatcttc agcctggtgg 1140
aggtggtcct gcaggcagag tccacagccc tcaagtacag cgccatcctg aagcggccag 1200
gcacccaggg ccacctgggc cctgagaagg aggaggagga gtctgacggt gagcccgagg 1260
actcaagcac cagctgagct ccaccagccg cctgccccgc ctgccccgcc tgcctgtccc 1320
gccacactgg ctttaggacc tgttgacacg gaggggggtt tttaatttgg tttttaacaa 1380
ctcaggggtt tgtttttatt tttatttaat ttttgcagct caacttttaa acaaactgca 1440
ggggagaggg tggggctgga aggaaggctg aggcctggtc agcagtgacc ccagcagagc 1500
aggccccagt cctcctggga ggctggcccc cctttttttct gggccctact gccctcctct 1560
gcccaggaaa tgggggggtt tcagcaactc agtgtcacag aataaaatca agtgtggagt 1620
gccatctggt gtgtagggcg cctctgggaa gcctgggcag cagaatgccc cttgcaccca 1680
gggcaaggga cccagttcag gcttcacccc tcgctgctga gccgatgtca acacctggaa 1740
ctttcctgtc agttccaaca cgattcagag ctggctgcct ggcagatgat tgatactgga 1800
gtctcattct gcctgattaa aaatggaatt agtatgcaac actgagagcg cccccatcac 1860
cctgacgaat gtgactgtgt ctgacgaatg tgactgtgtc caaccctgcc cccacttcct 1920
ctctgcacca gctccgcagg gcctggtggg agtcatgggt cctgtgatac cccctccct 1980
cagttcctca agcagcactc tgtgaggtcc tgtgcccagc tctggtgtga gtgggtgccc 2040
cggcagcacc aagggagcct ggacagagga gccggcctgg gcctgggga ggggaggagg 2100
gccctccagt gccttccaaa ccaggagggg aaactggctg ctggtgacac agcctgggtg 2160
acacggatcc cacctgcctc agtcccgagc agagctggct ggccactggg cagtcccttc 2220

cccagccagc ctgaccccag cctgtactcc ttccccctcc gtgggggaag ctccgtggct 2280
tggcgtcccc gagagctgcc agaaactagg atgaaagcca tggtgagcac ggcctctgtt 2340
cccctgcacc atttcctggg gtgtccggat taacaagctc atttgatctg gttacagtga 2400
attttcttca aagaaacact caatagggtc ccttgtcaga gtgcctcgca gcgacagtga 2460
ctgggtactg ctgcctttgt cctgccaccg tcagacgggg ctggctatgg gaggcaacca 2520
aagacatccc gcacctgccc tgggagcctt tccctcctcc agggctcagc cacctcaggc 2580
ggccttccgt ctgtgtgtcc tgccaccccc gagatgtccc agaggccacg gtcaccccat 2640
ctgttcctgt ccccagaacc ttctcctgga gccaagtatc tgcagggaca gacaggcgag 2700
cgtctggggg tttggtgttg gggtggagaa ggctgtgggg tgctgcccca gcccaggcag 2760
cctgactgtg agagccccaa acaggagagc cccaaacagg aaggaccagg gcccttcccc 2820
tcccctccat gctgcccacc ctctgaggag cagtggccaa gttcctctct gggcttctcg 2880
ggccaggctg accctgtccc ccagggcctc ccacgaagca tgggagctgt tccctcacag 2940
gcagcacaga cccggacgga cacctgtccc tatgtcccag cgcccccagg ccccagtgag 3000
gagtagccag gggggtgaac aaggggttc ctgctgcctg ggcttgtttg ggaagcagat 3060
gctgggctca gagtttcttc agagagcctc accttccgtg ctggccccag agcatggcgg 3120
gtccctggag ctgtggaggc catggcagcc ccagcccacc ccaccccatc tggggaagtg 3180
gaaaccgtat ccacgagggt caggtcaggt ctctgcctcc agtgacctgg caaggttgtg 3240
cccagccagg acctgggctc aggcccaggc agccgccaca ccctacccag agctcagaga 3300
aggcagccca gccttctccc cacaccagtc acaccgagcc ccgcgtctgc attcactcct 3360
ttaaggaaca tggttgactg aatccggtgc cgcgcattca caggatggct ctccatgggt 3420
ccactggggc ccagcctctt atgtggcccc tcgctaaaag gactcaacag aaagagtgac 3480
caggcaccga ccctcatcta aaggaggact tggccattcc ctgggctgtc ccacagcacc 3540
tgccggccag ggcccgggca cagagcgaga ctgtcttttc ctcaaggaga caccgtgggg 3600
gagggaggga gaggtagaca ccaccaacct cattccatga ccagggcctg gcgatgctca 3660
gaagccagtg agtgtgtccc tgccctgaag ggtcagtgct ggccccctgg acctaggggg 3720
aagatggtgc aggcagtggc ccagcctgag gaaggagctg aagctctcaa gagtttgcag 3780
ccaccctcct ggggagagac tgacgcctcc ccagttcctg ttaggaagga cctcaggaaa 3840
gaactggaat tacacagcct ggggtggcag cctcctggtc cctgaggagg atgtcaggcc 3900
gcagaaggga ggaacgggca tgaagcttgg gaagcgggcg ccagaggagg cgaggcctct 3960
gcagaagcag caccagaggc cactgcagcg gctccaccac ccagcagcgc cgccaggagg 4020
caggaagtgg gaggccaggc aggaggggct gtgattgccc aggtgccagg aggaagggct 4080
gagaggggac agtgcagatg tccagagagg cctgacaggg acaggctgcg aaagtcacgg 4140
gtggggatgg gcttccgcca gagttgtgtg tggcctgagg acagtgcagc aaggaggccc 4200
catggtgagc acatgcagcc gaagtgacag gttgggctcc tttgtgggac aagagcctct 4260
ccaggccact gcagggtgtt cagagaacaa ggcctacaag gatctgctgt gcctgcagct 4320
gggcagtaga acactgagca tgcagggccg gggtgggaag caggaaagcc acatggacga 4380
gagagccggg cctgcccagc agtgcctttt gggagcgcag gcaggatggg atgtgcagct 4440
gtgacctgcc cggcatagaa ctccgtctgg ctggggagag gaggtctctt ctagccagaa 4500
tggaccagga ggtcccggga ggacctggga ggaagtggat tgagttgggc cttagaagga 4560
gagccaggaa caggccaggt caggggagct ggagcctggc taggtatgga gagagcaggg 4620
tacacttgct gcaactgtga gaagagccag gggtggccct ggtggcctgg gcgcgtttag 4680
ctgtgcctgg ggccaggcct gactggctgc aagtcattac tataggcgga gagtgcagag 4740
tagcgcgctc ctgctgtcac tccctcctcc aagtccacaa agaggcaaga aagggaggat 4800
tttaaggcct atccataccg catggcaggt gagagcagag gagcaaacag cacttttgga 4860
tcctggaaag cagaaggtga gtgtcccagg cgtagctgac ctgagaaagg cgactccaaa 4920
gccagcagca gcaacagctg gaactgcccc agcctgcacc acgggacccc cagctctgag 4980
actgagagca gctctgggga cctctgggct ggggtgaaga gggatggctg gaatcattgt 5040
tgcaaacaat tcagtaggca ggcagctccc tagatcccac cgtggtctgc agaggccagc 5100
acctgtcccg acctcttact ggtcggccct ggagagccat ctcctacaga ggcaaaatga 5160
acggtctctg ggccaggacc aggcctgttc agggggatgt gtggctaagt gcataaggga 5220
tgctgagact acagccctcg tgcccaggca gcgctcaggg catggatagc caggccctcc 5280
ccatccaggc cagagatggg aagactccat ccaatctcat tccatgacca gggactggca 5340
aagctctcag ttctctctcc atcccagcag gagacaaaga acccaacctc agagattcct 5400
caactcggag acccagccag gccaccctcc agagcatctc agtctgcaag ccccttggtg 5460
tgctcagagc ttccagtcac actgctcatg cctatccgtg cacagccagg gattgccctt 5520
cgtggaggaa aacttcatga aacaaaaaac aagctccgtg gggaacacag accatagagg 5580
aaaaagaaag ctgtagaaaa agaaatgatg aatgccttcc tggaggtgag aaagccatcg 5640
tgaaacgaga ggaggttgct ccaaaaagtt cctagagagc aaaacaaggg cccttggagg 5700
cacaatgatt gccaccgtgg agacacattt cagcgccact agagtaaaaa cactgcagac 5760
aggtgagctc tcaacagata catgtccctc gccttctcag gaaagatggg cagtaatgag 5820
ggcagaagcc acaaagagga aaccgtagtg acaggaccca gggtccttca agctgcggtg 5880
gggcaagcgc tcgggacagt ggtgagggag cagctcagcc ccaggtggtg cctggcaacc 5940
cgccccggga cgtcccaccc agggcagcag tagagtgaca tggatagaaa gctgaattcc 6000

ccagaagagc ctggaggaca ttgaagtact tcgcatagag cctcgggttg gattagtagt 6060
acatacagaa tgatccacat gtgaagataa gaccatgatt ggctccagag aaaacagcag 6120
tgcaagcaag aagaggtagc tagtcacagt ttacgatctg gcaatagcgt ttacacagtc 6180
atcaccatag aaatgccgag tcaggatcta gtttactgca gaactctatc aggaggactg 6240
gaagatgggg acgctgtcca catgcaggga atgcagttgg tgaaatggaa gctaaatgct 6300
cattttcctc agtgggaagc tgtggcttga agatgactgt aaactctctt tccgcctctt 6360
caatcttgac aggccccagg gctgctaagc taatatggca gaagggacac tgtgccagtt 6420
gcaggcccag gccttaagag actggcagct tcccctctct gtctctggaa acctacctgc 6480
ccttctgtaa ggaagcccaa gcagctctgg agaagccctt atggaggggc ccactctcag 6540
cccacagcca gcaccagttg ggcagccacg cagaccccca acctgcaagc caggcccgct 6600
gaggcctcag tacacacagg cagtcccatc agccctgccc agatggcagt tttgtgatca 6660
aaatatagac gatagatgat tgtttttaa ggttgttggg ggtagtttgt cacacaacga 6720
tagataatag aacatcagta ggctgtgtgt gtgtgtgtgt gtgtgtagca tatatatata 6780
cacatataca tatatacaca tatacatata cacatacaca tatatacacg tatacatata 6840
tacacataca tatatacaca tatatacaca tacatatata cacatacaca tatatacaca 6900
tacacacata cacatataca tatatacaca tatatgcata tatacacata tatacatata 6960
tacacatagc ttcaaattca gacatgaaga agtatcttat ttagcaacag tggtaaatag 7020
taaaacacca agagagagga aagtggttgc ctcagagatg ggaaaatgca aggagggaga 7080
cggaactgct gtttgtttta acaaaccttg tagatctgtt tgatacttta aactacattc 7140
acatataact tggacaaaag taaaaactga agttgaaaaa aatgtattca tgctaatagc 7200
acaggaatga tccacaattg gattccaagg cttcttgtac attcagcata gggtgtatga 7260
aagagtccac tattctagca acagataaaa ttcctactga cacgcaacct caggttccca 7320
ctcgtttaga aggctgcgta tggtcttcta cttaaagcct caagtagcag tcatggcagt 7380
gacaaatcct cattgcctcc atagaacctc taggctcatg tgtgagccca ggctgggctg 7440
gggcccctgg gagcccaggg tgaggggcca gtccctgggc agctccgtga gccaggagca 7500
gctgtgccac ctggggaagg gctgcacggt cgatgggtct tttctgcaga agagtgtgcc 7560
ccagcccttg ctgggcacag atcaaagagg tgttcatggg tcgaaatcac agatttcaag 7620
ggctgatagg agtcagagtg gggggctgg gagggctgag gcaggttaaa gatttgagag 7680
gggctgctgt gtccacagct gcatcacact gctctgctgt cccctccatg ttccccggca 7740
ctgccgccta ccctggggtc ttctggaagt aactgaaggc cccctcaacc tggctcatca 7800
tcaaagcaga ctgttgacta gctgcaggca aatatgaaga ggctatttcc tgtcacaaaa 7860
aggccatgct gtatctttct gaagctatgg agctgacgca ggctgagtag gctcaccttt 7920
cactggaatt gcaaaggcct agccacatga aaccgcgcct cctcatccag gagacacgga 7980
aaagggccca gcagaacgca gacaaggatg gggctgccca tcttcaggcc tctcacagcc 8040
cctctgctga agatgcagaa gcacagccct ccacagagga acgcctgcct gagactcggg 8100
gcatatgtga cagggatcca gacacacgac tgtttttcct tcagcaacag agccgtgtat 8160
tggaagcaaa gccccaaaac acgataagag tagaggagca gacaacccag ttgcagattt 8220
gaagaagcat gtggaattcc ttgtggcgga gaaggaaaga ttatggaaag aaagtaaaca 8280
ggtaaaggct gaaaaggcca gacttctaaa aggtccagta gaaaaggagc tggatgtggg 8340
tgctgatttt gtggaaaagt cagagttacg gagctcgcct ctgcattcag aaactgctat 8400
accctcttca gccttgcaga ggtttgcagc agatgccagg aaagccaagt acattccaat 8460
acccaatctt ttccctcaga ttttccatct ccagagcttc cctttatgga gctttctgag 8520
gatattctga aaggatttat gagtaactaa aatggaaggc catagaagaa gggagaagag 8580
gaaataatac taagtcatac agttaatcca gcaacaaaaa atgaaaaggg aaagccacag 8640
gcaagggtaa tcctggaaat gcctcgtcat ctggtgtact gtaggagaag acgcattgcc 8700
aggatgtggg gaacagtcgc tgtgaagcgt gtcacatacc tgattcactg acttgagctg 8760
atgatgccga cctggcagac actaaactcg tggagggtca gtttctcttg acaccaacca 8820
aatggctgcc tgaaagaatt ttttcaagca acaattattt ttcttatctt cagggttaaa 8880
atgtataaaa gtatgttatg tataattaat ctgttatgtc ataagtgatc atgcaaaacc 8940
taaatattat ggcagcctga ggggctgctt cgtatttgaa acatgctttg tctcaggcgt 9000
tgacgtatgt atgcattttg ttactggcgt tttgtataag gtgtgagaca caccttcca 9060
gatgaaacca tatgtgccgc actgtgcact actcataacg gtgataacct caagaccatc 9120
aggagaaata tttaaatttc cgtgttatga agaaagaaac caaattatta gttatgcttt 9180
ttaacacaaa ttaccagttt acataattaa tgagggtgca ttttaagttc taactttatt 9240
gtataaggca tcatttgaaa gtaccaagga agtcttcttt gtttttagtg atccgtgagt 9300
ggaaggaatt ctagttggca gtatttgatt gtaagaaatc aataaagtaa ttgtgtttaa 9360
aaaaaaaaaa aaaagatctg agccctggtg gaggtaacag gatgcgatgg ttttcacatt 9420
caagaaggtt ctggagaaga gagatgattc ttggaatgat gagcttcaat ttgcacatgc 9480
ctgagtttag gttctgaatt taaaccctta ttgtaagatc atctctttga accttctctc 9540
tttttaaggg tttttacagt tcagtggcat tttttttaa tatttaaaaa gtcattttag 9600
gagaaacatc catttaaata atttatttta cttcagaaag ttgttttact caacgaggat 9660
catgaactga gttgtgttct ttaacattca caaattgtgt attgcttggt tttggaaatt 9720
agttagccaa ataatttaaa aagcaccaga aattgaagtg caaaatagaa caggaaagag 9780

aaactctcca ttagtgtatt cagcttaaca ggttttcaac ccaccagggt gctgttggaa 9840
tacaattgtt ctcctggttc ttatgataca agatcaaggt taaaccactg aatacagtta 9900
cagcatcctt gacttcataa gctttccttt ccatgcatcc atatagatgc ccaaagcacc 9960
attcagggca gaatttagtc tttcgtcccg cactctcaaa ggacaaccag gagctaggac 10020
ttggctgaac cacccaccta ccaggtgccc ctgcctgtgc caccatcctt gggccaaggg 10080
gaggcctggc ccctgccacc tcagcgatgg tgaaggatca gcccacttgg ggcccggggc 10140
gcctggctga gcgccccctc cactgagccc gttcctgtgc ccccaatttc ccacaggctg 10200
aggccccagt gccctgctcg tgctgctgag ggggctgaat ggcctgttga gaggcctccc 10260
caggaagccc atagggagga ggttggggtg tctcctgcct tgggggtggg acagtccctt 10320
cttgttccca ccccaggtac ctgacccaag ttctcctgtg catgaggaat gcctggatgt 10380
ccctccttgg taggtgggat ggcccagagg gaggtcctgc ctacacagcc cttaattagg 10440
aatttagaga tttgtgctct aggaaggagc tgcttccgct accatttggc caactgtgtg 10500
ctgtgcagac ccgcagcttg gaaacaggtt tcaaggatgt tcaggacttg cctcgtgttc 10560
ataaaggtca ggggtcgcct cttccccctg ctcccctgct aactctgcag caggccctgg 10620
actaattaag tccccgcaac agccccgaga cccaggctct gtgaaagttg tcagaatcag 10680
aatggagcca cttctgtcca accctaagag caacaacaaa atcatgcggc cgggaggttc 10740
tgaaggaggg ccctcccgca cacctgccta tgatcagagc ccttccgaag cctctgggaa 10800
gggcacagat gcctgcaaca agacctttg ccaggacttt acaggacttt gcagctcact 10860
acgtgagtca caaggacggc tagccggctg cacaagaaca cttgcctgat acgctgtgtc 10920
cactcgtaaa ttgacgtcca ctcctgggat aagcccctgg aaccagtgtt ctcttccttt 10980
caaaataacc atgtagccag acttggtggt gggtgcctgt aatcccagct acttaggagg 11040
ctgaggcagg agaatcactt gaacccagga catggaggtt gcagtaagcc aagatcgcgc 11100
cactgcactc cagcctgggc aacagagcaa ctcaagaaaa acaccaccac caccaccacc 11160
accaccacca ccaccacccc ccccaaaaaa ccgaccatgc actgctcctt tcacctttca 11220
aagccccctt tgcctccccc cctccgatgc gcccctagtt tactaaggcc ggggctctgc 11280
atgcagtgct gctgcttatt cccagttaaa ctccatagtt ttggagagcc tccctctgtt 11340
tcttgaggtt gacaggacta tcattctttt cgttcataga tgagggaatt aaggcttgga 11400
gaggttccgt tctgaaggac actcagtaag tggtggacag agaatttcag ctcagatcca 11460
aagcctattt aatttacttc ttttaaatcc atgcttctta gcactcagct agtcacgtat 11520
caccttgaca acttttgcc gtagccacat tactgcctgt ggtatgattt gctgaatatt 11580
tttctctaca taagctcaga ttttccttaa atctgttagg aaacctataa ctgaaaaatg 11640
gaagaccact atctcttgcc gtaaacagaa gcaactgtgt attccacaca caccaaaagc 11700
aatgttctta cagcctcctt agatgctctg agtctaaagc atgctttatc ttgttaaagg 11760
ggggatggca aagttagggt gatagtgaag acatagaacc aactgagatt ctctccttga 11820
cattatcaga agggttggaa gacaatcaaa aaataaccag ctgggagcgg tggctcatgc 11880
ctgtaatccc agcagtttgg gaagccaagg tggccagatc gcttgagccc agaagtttga 11940
gaccagccta agcaacacag caagacctcg tctctacaaa aaatactggc tccgcaggag 12000
gctgaggcag gaggatggct taaacccggg aggccaaggt tgcagtgaat tgagatcaca 12060
ccattgcagt ccagtctgga tgacaaagct agatcctgtc taaaaaataa ctttctcatc 12120
gtgaagttta atactattta atgtcttgtc tgatggcagc taaaacatgc cccataccac 12180
ctaatctgga gtaccacact ttggaaataa gtgtgtgtca cattttggaa aatgctgatt 12240
gcgatgaaaa tgggaaacat ggctggaacc catcatctaa tccggatcac actgcatcac 12300
tgcatagtgt tcactccttt ttctgtcttt gtttttaaga tatgtcacac acgatgaaga 12360
gtgcagaaaa cagaaaggta tggcctaaag aagaattaca gaattgaaca ccaaagtaac 12420
cgccacccag atcaagaaat tgattgtggc cagggttccc ccacaccacc ccatacctttt 12480
cccatcgaaa acactattct ttcttaccac tgaatttttt ttctttttct ttttaaagat 12540
ggggtctcac tatgttgccc aggctggtct taaaactcct gggctcaagc agtcctcctg 12600
ccttggcctc ttaaagggct gggattacag gtgtgagcca ccacacccga ccaccactga 12660
atatttggat actcatttta ttttcatagt ttttttgttt tgtttttgag acagagtctt 12720
gctctgtcac ccagactgga gtgcagtggc atgatctcgg cttactgcag cctccacctc 12780
ccgggttcaa gtgattatcc tgcctcagcc tccagaatag ctgggattac aggcacatgc 12840
catcacaccc agctaatttt tgtattttta gtagagacgg gggtttcacc atgttggcca 12900
ggctggtctt gaactcctga cctcaggtga tctgcccacc tcagcctagt tactgggatt 12960
acaggtgtga gctactgcac ccagcctctt ttcatcgttt tatcccccat atagtttagg 13020
tttgccccat ttgaacttca tgtatgtgta agatatattc tatcctatgt gttccttttgt 13080
gatttgtata ttttgttcaa ctttatgttt gtgagattta atctgttgta tgttagaaaa 13140
gcctggtcat ttccattgct gtataatatt ccagttatga aactcctgac actttttctg 13200
ctgttgatga gcatttgggt ttttcagtgt ctggctattt aaacaatgcc actttgcaca 13260
cgttggtgct tacatcctgg gacacgtgtg ccaagtttct gcaggacact ttcccgggat 13320
ggaattgctg tatcctggga tgtgcacaac ttgacgtcct gaatgatgct cttgagtctg 13380
gtgtgtgggg cgcctattca tccacctccc tccaccctac tatgggtgga tttttaggtc 13440
tttgccaacc tggagtctgt gataccttct ccaccccacc ccaatgtgct ttatcccaca 13500
ttgattggac gccttttcac acatttactt ttgaactcag cctgaggtta ccaaaccctc 13560

tggttgaggc tacacctctg ggtgtgccca gggctgctgg agaatagact ctccctggag 13620
cttcatctac ctgtgcaagg gaacggggtc aaactcaagt gtacaagctg ctctagaaga 13680
tgcagcccag gcctggctgg cccagggcac tggtccctcc cccggcttcc tcctccagga 13740
agaggtgtgc acacccacag gcgtgtacac gtgggcaagg ctggcccagc ccaggctgca 13800
atcatgacaa agacaaggct ccacttaatg ttgtcaccac ctgccccacc ctttcccaca 13860
gcactggaac tctgggccca ggctcctgcc agccccacct gtctgggcca tggctggtga 13920
gaaaccaagg ggtgccaggg ctgccagacc accctaccta cctacttccc gctgtctcca 13980
ggactcatgg cattaggagg ccaaacccac actgtggcct gggctgtgtg cttcgagctt 14040
cacctccctt cagcaccaga acagggtctg gctgtaggtg gctcccagga aatacagaaa 14100
aaatgggtga atgaacaagt gacagggtgt cttgttccac acaagacaca gtgagtggga 14160
gtgggggtgg cttctggctg caggatgcac actgccctca cccagatggc atctgccccc 14220
aacaccccat tcttgcctgg cagacaccgg ggcccaccct gagctgcctt tctcaggacc 14280
ccaggccagg caagccacag cctgccactc ccttcagcca gtgtggcttc aggtcaccaa 14340
cctggggcag gatcaagctg gcaacaaggg aaggggccgg gacacagtcc tccctgattt 14400
aaactctaat ctcagcgtct gtgcagtcca gctcctccag gcgctggccc aggacatact 14460
tgatgtcttc caccagctgc cacacctgca gagtcgggtc ggggagcaag gatcagccca 14520
gcagcctttc actctggtcc atcgctcctg gcatgaggag tgtccccatc tttaggcacc 14580
acttacaaag cccagagctt ggttctgagc accaagagga aaccctggag atggggatcc 14640
aggccctgca cccccgacaa taagctcaga ggctagaaga ggaaactgcc ccagtaacca 14700
ccctggacat cccttaaggc catgcctccc gagcaaggct gagaaggctg ggcaggggct 14760
tcgtggagtg ggtcaccttc cgctgacaga ccaggtaggc ttcctggagg aggaggcctg 14820
tggaggagca gcctggagcc tcagaatagg ctgagccttt agcagggcct ggtgctactg 14880
gctgcagggg gacgtgtggg gctccccttg ttaggaccat ggcctcagga gggatccacc 14940
ctcagttcag caccagcctc cccacgttaa accagggtaa cccaccttgg cagtcgagaa 15000
gtgttcatgt acaaagaggg caccaagtgc cataccaaag tggtggttgg cctggcccag 15060
gcagacctcg gccagctcct gcagcttgtg gcttccctct gtctcccgtg ccaactcctg 15120
cagtgcctca tggaatggca gggacaggtg ctcactcaga accaccacca cgcgccacac 15180
taggtagttg tgcaggatcc tcgggccagg tgaagccagt ggatgtccag acagacgtgc 15240
atatgggcca ccaagggcac cacccccacc tgtgcccccc agcctgtggc tggacccagg 15300
acccagacaa ccccacaaag aaggggcagg aggtcatccc agaaaatgca gagcagcggg 15360
gagagccagg atgtcaacct agggctctgg atttctattc tagtgctcaa cagctgcctc 15420
cctcagtgtg gctaccggac acaggtggag gtgggaattc aaagcccacc cagcagacag 15480
gtcctagagg ccggtggaca ggggctagcg gatctgcagc cgtccctatg gggtgcggag 15540
tggatgagct gggtcacctg ctacacttag tccgtcgcca gcactagcac ctcctcttcc 15600
tctgagaacc agtaaaactc ctggcacggg tcgatgctgg catccaggtt ggccgccagg 15660
aagcgagcgg cgcgcgcgaa ggccttgcac tcggggcagg cgccgccgcc cgccgcgacc 15720
ggtccaggta cctgagcgcc agcaaagccc ccaggatggc gcagaggccg gcggcgaata 15780
ccagccccga cagcaggctc acctcgcgcg ggttccagag ctgcagcccg gcccagcccc 15840
ggtggcgctg cttcccgaga gaagcctgag gggcagagag gccccgcaca ggcccccagt 15900
gcctcaagta cttgacctcc tggaactcgt ggtagtgcgc cctcagcgaa taccgggact 15960
ccaaggcgcc gaggccgccg cggtgcagcc ctgggccacc tgggctacgg gatgcgcgcg 16020
gccgccggcc tcctcgtggg cctccgcttg gccccgggac gcagctgcgg gaaaaacagt 16080
gtcaagctca ggaggcgccg cagcctgacg gagctcccgg gcaccatgag gagggacgca 16140
ggtctgggta cagaggcccc agctgcggac ctcattcacc gcggaaacca gggacgagga 16200
gggctcggcg gggccacgaa ccccgcgtgc acagtggagt cttctcccct gtcccctccc 16260
tgcacacatg tgtcggtccc tgggttggga gggccttgat gggaagcggg aggggccggg 16320
cacggggcct ggcacgtagt gggccttcat tgaaaggcca tccctcttcc cttcgccttt 16380
cttgtccacg acctacccca gccaaggccg ggtggggtga gagggaagga gccgaggctg 16440
aagtgaggag gtggggtcag gggcccgtct atgcagcact ttcagctctc cgcgctggac 16500
ccagacagac gctccacaaa gtggccaaag aaccaaactt tgtcctcgca gaagtccgca 16560
ggatcgacca ctccaacccc gctcgctggc tccttctact cggtggcccg acggctcacc 16620
cgcccttcc tcaccggcgc gcgccaacgc cccagggtgg cgaatacaca gcccaccctc 16680
tggacggccc tgatggagaa cccgagaccg gctcagtctc cccgaccctc gtctctgtct 16740
ctgccccggg ccaatcccgg cttcaacagg ttctccccag aacccaaact tgggtgaagt 16800
ttcaccccct cgcggggcgc gggctggccg ggtgcgcccg gagtcctgga gccgcgccgc 16860
tcagtccgtg gagcccgaga gcgaagcctg ggagccgcag cctgagccgc gaggaagtag 16920
atgaagccag gaggctccgc gcagcggccg caagggcggc ggaggtggcc gctgtggtgg 16980
ccacctagcc ggcaggtgcc cacccaaggc aggacctgga gcggcgccgt tgcctgtgtc 17040
tctcagcgcc ctctgcctct tctgcctcac ccccgcccgc ccgtcggccc gaggaggggg 17100
acgcgatggc ggctccaccc ttcttcgccc gccccgcgct cccctccttc cttctgcgac 17160
cctcgggccg cctggcacag cggcggcagc gcggacgtgg gttggcggcc gcggagacag 17220
gctcccgagg gtcgtgcgcg ggttgcagtc ggtgactcgg ggtccagctg cgtcccggga 17280
caagtgaagg cagcgggtag tcccgggagg agtcccctcc gatcccaggt ccccactcgg 17340

agccgcccac cagcctgctg gaaaggggct ggagctacgc agctgggggc cgtcatgccc 17400
cagcccacag ccctggagca ccgcccaggg aggactcctc ctaaaggata agggggccct 17460
gatggagtgc ccgggctgcc cgcacagcgc ctgcgcggag cgcaccttca ccagggagct 17520
tccttgtcct cctgggaaac cttgtccagg atcagctctc cccgggggggt ctgggcttct 17580
ggttggcctc gccccttcc cccagctcct gatccaggga gagcaacgga gagccctgcc 17640
agaagaaggc ctgggcctgc gagtgcggcc cccatggtac caatgcacag ttgacccaga 17700
gcacagcaat cgcggccaat aggaggtgac gtgggtttag cctctgacca cacagtcctg 17760
gtcaccctgc acagactgcc tttattgggg gctccgaggc ccagctcctt ggctcttctg 17820
cagtttcaca taaagggaag cagccagccc tccggctccc tcactctttt ggggtccccc 17880
acccctaatt gctaaagtga ccccttgact cacaagcaag agaatgatag gccacagcgg 17940
tgcccagcta aactcagcca agccctgagt gaggcagctg gatacgcagc gtgggtgttg 18000
gcggtagggg ctgggggcag tgggggtgga ggctgtggcc agagctgcct tggagagaga 18060
aggcccagga gggtgcaaag ggcagaggtg agaggttccg aatcccaacc tccgtctcct 18120
ccctgaggaa ggcagatccc agccagtctt gcctgtgaaa gttgtcagaa accaaatgga 18180
gtcacttttc ttaaaaactc tgacaaatag aggcaggaaa ggccatgagt ggagagtcct 18240
cgggcacaaa acctgatgaa aactatcaca aaagactgca aacaaccact tgcgcaaagg 18300
ccatggcaac cttcacaaaa aatatacaca cttttgcaaa gacatctgcc cagcaactgc 18360
ctgtccagcc tcagactggt gccacccgtg tcctggtaga caagaataat cgtcacaaaa 18420
caatcctgtg attctccctt ttcctttaaa aacacatgca gacacatact tgaacacaca 18480
tgcacacaca catgcagatg cccacacatg cacacatgtg catatacact cacacgtgca 18540
tgcacacata catgcatata cacacgtgta cacacataca cacacacaca gggtggctcc 18600
cccaggggac tttgccatgc ctcattttgc ccatctgtaa agggggtgat tatagcccct 18660
actgcatgat gctgccgtgg ggctccgtga gtccgtacct ggaggatgcc taggacgggg 18720
tctgaactaa acctgtacag tcccatgggg agctgagtgg agaaggtggg ctttgacatg 18780
gggagcagag ggggcagtgt ggaaacccag ggagcctaag ggtctgggca cctgtcacct 18840
aataggaggc cccaaggggc ccctggggaa gaggcaccga cctccttgtg gctggtaagg 18900
gaacagggct gaggccagga acaggccagt gagagcctgc aggggccagg gagtgtgaca 18960
gccaaggacc ctcagggcac tagcctgctg aggaccccag gccacactca ggcctgggca 19020
agggactgat ttggggactc cttgaggttt ctgactcaag tgattgcaca tgaggttagg 19080
agttcgagtc cagcctggcc gacatggtga aaccccgtct ccactaaaaa tacaaaaatt 19140
agctgggcat ggtggtgcac gcctgtgatc ccagctactc gggagactga ggctggagaa 19200
tcacctgaac ccgggagggt tcaagtgagc tgagattgca ccactgcctc cagcctggac 19260
aacagagtaa gactccacct caaaacaaac aaacaaacaa acaaacaaaa acaaacaaag 19320
ctggtggggg agatttgtaa ctgcatcaga ataatctggt tcaactttgt ttttatttt 19380
tatttttttg agacagagtc tcattttgtc acccaggctg gagtgcagtg gcacgatctc 19440
ggctaactgc aagcactgcc tcccaggctc aagtgattct catgcctcag cctcctgaat 19500
agctgtgact acaggtgcac accaccacgc aaggctaatt tttgtatttt tagtacttcc 19560
tgctgattag ggatgtaggc cttggttaga ggaatgaaat tgtttttagt agagatgggg 19620
tttcaccatg ttagtcaggc tggtcttgaa ctcttgacct caagtgatcc acccatctca 19680
gcctcccaaa gtgctgggat tacaggcagg agccactgtg cccagcttgg tttaattttt 19740
atgtaacaaa gttgtgagtt gtttttcagc ggccgtggac ccccaggtta aagttcgcat 19800
accttgagca tgcccaggtg aacaaagcat gccaccatag ggaggaccta agtgctccaa 19860
ccaaggagca agaactgaat taagaagcag atgggggggga ggagccaaga tggccaaata 19920
ggaacagctc cagtctacag ctcccagcgt gagtgatgca gaagatgggt gatttctgca 19980
tttccatctg aggtaccagg ttcatctcac tagggagtgc cagacagtgg gcgcaggtca 20040
gtgggtgcgt gcaccgtgcg cgagccgaag cagggcgagc cattgcctca ctcgggaagt 20100
gcaaggggtc agggagttcc ctttcctagt caaagaaagg ggtgacagac ggcacctgga 20160
aaatcgggtc actcccaccc gaatactgcg cttttccgac gggcttaaaa aatgccgcac 20220
caggagatta tatcctgcac ctggctcgga gggtcctacg cccacagagt ctcgcggatt 20280
gctagcacag cagtctgaga tcaaactgca aggcggcagc aacgctgggg gaggggcgcc 20340
tgccattgcc caggcttgct taggtaaaca aagcagccgg gaagctcgaa ctgggtggag 20400
cccaccacag ctcaaggagg cctgcctgcc tctgtaggct ccacctctgg gggcagggca 20460
cagacaaaca aaaagacagc agtaacctct gcagacttaa gtgtccctgt ctgacagcta 20520
tgaagagagc agtggttctc ccagcacgca gctggagatc tgagaacggg cagactgcct 20580
cctcaagtgg gtccctgacc cctgaccccc gagcagccta actgggaggc acccccagc 20640
aggggcacac tgacctcaca tggccgggta ctccaacaga cctgcagtcg agggtcctgt 20700
ctgttagaag gaaaactaac aaacagaaag gacatccaca ccaaaaaccc atctgtacat 20760
caccatcatc aaagaccaaa agtagacaaa accacaaaga tggggaaaaa acagagcaga 20820
aaaactggaa actctaaaaa gcagagcacc tctcctcctc caaaggaacg cagttcctca 20880
ccagcaacgg aacaaagctg gacggagaat gactttgagg agctgagaga agaaggcttc 20940
agacgatcaa attactccga gctacgggag gacattcaaa ccaaaggcaa agaagttgaa 21000
aactctgaaa aaagtttaga agaatgtata actagaataa ccaatacaga gaagtgctta 21060
aaggagctga tggagctgaa aaccaaggct cgagaactac gtgaagaatg cagaagcctc 21120

aggagccgat gcgatcaact ggaagaaagg ctatcagcga tggaagatga agtgaatgaa 21180
atgaagcgag aagggaagtt tagagaaaaa agaataaaaa gaaacaagca aagcctccaa 21240
gaaatatggg actatgtgaa aagaccaaat ctacatctga ttggtgtcac tctgaaagtg 21300
acagggagaa tggaaccaag ttggaaaaca ctctgcagga tatcatccag gagaacttcc 21360
ccaatctagc aaggcagccc aacattcaga ttcaggaaat acagagaccg ccacaaagat 21420
actcctcgag aagagcaact ccaagacaca taattgtcag attcgccaaa gtagaaatga 21480
aggaaaaaat gttaagggca gccagagaga aaggtcgggt tacccacaaa gggaagccca 21540
tcagactaac agcggatctc tcagcagaaa ctctataagc cagaagagag tgggggccaa 21600
tattcaacat tcttaaagaa ttttcaaccc agaatttcat atccagccaa actaagcttt 21660
gtaagtgaag gtgaaataaa atactttaca gacaagcaaa tgctgagaga ttttgtcacc 21720
accaggcctg ccctaaaaga gctcctgaag gaagcgctaa acatggaaag gaacaactga 21780
taccagctgc tgcaaaatca tgccaaaatg tacagactat cgagactagg aagaaactgc 21840
atgaactaac gagcaaaata accagctaac atcataacga caggatcaaa ttcacacata 21900
acaatattaa ctttaaatgt aaatggacta aatgctccaa ttaaaagaca cagactggca 21960
aattggataa agtgtcaaga cccatcagtg tgctgtattc aggaaaccca tctcacgtgc 22020
agagacacac ataggctcaa aataaaagga tggaggaaga tctaccaagc caatggaaaa 22080
caaaaaaagg caggggttgc aatcctagtc tctgataaaa cagactttaa accaacaaag 22140
atcaaaagag acaaagaagg ccattacata atggtaaagg gatcaattca acaagaagag 22200
ctaattatcc taaatatata tgcacccaat acaggagcac ccagattcat aaagcaagtc 22260
ctgagtgacc tacaaagaga cttagactcc cacacattaa taatgggaga ctttaatacc 22320
ccactgtcaa cattagacag atcaacgaga cagaaagtca acaaggatat ccaggcattg 22380
aactcagctc tgcaccaagc ggacctaata gacatctaca gaactctcca ccccaaatca 22440
acagaatata catttttttc agcaccacac cacacctatt ccaaaattga ccacatactt 22500
ggaagtaaag ctctcctcag caaatgtaaa agaacagaaa ttataacaat ctctcagacc 22560
acagtgcaat caaactagaa ctcaggatta agaatctcac tcaaagccgc tcaactacat 22620
ggaaactgaa caacctgctc ctgaatgact actgggtaca tgacgaaatg aaggcagaaa 22680
taaagatgtt ctttgaaacc aacgagaaca aagacacaac ataccagaat ctctgggatg 22740
cattcaaagc agtgtgtaca gggaaattta tagcactaaa tgcccacaag agaaagcagg 22800
aaagatccaa aattgacacc ctaacatcac aattaaaaga actagaaaag caagagcaaa 22860
cacattcaaa agctagcaga aggcaagaaa taactaaaat cagagcagaa ctgaaggaaa 22920
tagacacaaa aaacgcttca aaaaattaat gaatccagga gctggctttt tgaaaggatc 22980
aacaaaattg atagaccgct agcaagacta ataaagaaaa aaagagagaa gaatcaaata 23040
gatgcaataa aaaatgataa aggggatacc accaccgatc ccacagaaat acagactacc 23100
atcagagaat actacaaaca ccactatgca aataaactag aaaatctaga agaaatggat 23160
aaattcctca acacatacac tctcccaaga ctaaaccaga aagaagttga atctctgaat 23220
agaccaataa caggatctga aattgtggca ataatcaata gcttaccaac caaaaggagt 23280
ccaggaccag atggattcac agccgaattc taccagaggt acaaggagga actggtacca 23340
ttccttctga aactattcca atcaatagaa aaacagggaa tcctccctaa ctcattttat 23400
gaggccagca tcatcctgat accaaagcca ggcagagaca caaccaaaaa agagaatttt 23460
agaccaatat ccttcatgaa cattgatgca aaaatcctca ataaaatact ggcaaaccga 23520
atccagcagc acatcaaaaa gcttatccac catgatcaag tgggcttcat tcctgggatg 23580
caaggctggt tcaatatatg caaatcaata aatgtaatcc agcatataaa cagaaccaaa 23640
gacaaagccc atatgattat ctcaatagaa gcagaaaagg cctttgacaa aattcaacaa 23700
cccttcatgc taaaaactct caataaatta ggtattgatg ggacgtatct caaaataata 23760
agagctatct atgacaaacc catagccaat atcatactga atgggcaaaa actggaagca 23820
ttcccctttga aaactggcac aagacaggga tgccctctct caccactcct attcaacata 23880
gtgttggaag ttctggccag ggcaattagg caggagaagg aaataaaggg tattcaatta 23940
ggaaaagagg aagtcaaatt gtccctgttt gcagacgaca tgattgtata tctagaaaac 24000
cccattgtct cagcccaaaa tctccttaag ctgataagca acttcagcga agtctcagga 24060
tacaaaatca atgtacaaaa atcacaagca ttcttataca ccaacaacag acaaacagag 24120
agccaaatca tgagtgaact cccattcaca attgcttcaa agagaataaa atacctaggg 24180
atccaactta caagggatgt gaaggacctc ttcaaggaga actacaaacc actgctcaag 24240
gaaataaaag aggatacaaa caaatggaag aacattccat gctcatgggt aggaagaatc 24300
aatattgtga aaatggccat actgcccaag gtaatttaca gattcaatgc catcccaatc 24360
aagctactaa tgactttctt cacagaattg gaaaaaacta ctttaaagtt catatggaac 24420
caaaaaagag cccgcattgc caagtcaatc ctaagccaaa agaacaaagc tacaggcatc 24480
acactacctg acttcaaact atactacaag gctacagtaa ccaaaacagc atggtactgg 24540
taccaaaaca gagatataga tcaatggaac agaacagagc cctcagaaat aacaccgctt 24600
acctacaact atctgatctt tgacaaacct gagaaaaaca agcaatgggg aaaggattcc 24660
ctatttaata aatggtgctg ggaaaactgg ctagccatat gtagaaagct gaaacttgat 24720
cccttcctta caccttatac aaaaatcaat tcaagatgga ttaaagactt aaacgttaga 24780
cctaaaacca taaaaaccct agaagaaaac ctaggcatta ccattcaggg cataggcatg 24840
ggcaaggact tcatgtctaa aacaccaaaa gcaatggcaa ccaaagccaa aattgacaaa 24900

tgggatctaa ttaaactaaa gagcttctgc acagcaaaag aaactaccat cagagcaacc 24960
tacaaaatgg gagaaaattt tcgcaaccta ctcatctgac aaagggctaa tatccagaat 25020
ctacaatgaa ctcaaacaaa tttacaagaa aaaaaacaaa caaccccatc aaaaagtggg 25080
cgacatgaac agacacttct caaaagaaga catttatgca gccaaaaaac acatgaaaaa 25140
atgctcacca tcactggcca tcagagaaat gcaaatcaaa accacaatga gataccatct 25200
cacaccagtt agaatggcaa tcattaaaaa gtcaggaaac aacaggtgct ggagaggatg 25260
tggagaaata ggaacacttt tacactgttg gtgggactgt aaactagttc aaccattgtg 25320
gaagtcagtg tggcgattcc tcagggatct agaactagaa ataccatttg acccagccat 25380
cccattactg ggtatatacc caaaggacta taaatcatgc tgctataaag acacatgcac 25440
acgtatgttt attgcagcat tattcacaac agcaaagact tggaaccaac ccaaatgtcc 25500
aacaatgata gactggatta agaaaatgtg gcacatatac accatggaat actatgcagc 25560
cataaaaaat gatgagttca cgtcctttgt agggacatgg atgaagttgg aaatcatcat 25620
tctcagtaaa ctattgcaag aacaaaaaac caaacaccgc atattctcac tcataggtgg 25680
gaattgaata atgagaacac atggacacag gaaggggaac atcacactct ggggactgtt 25740
gtggggtggg gggaggggag agggatagca ctgggagata tacctaatgc tagatgacga 25800
gttagtgggt gcagcgcacc agcatggcac atgtatacat atgtaactaa cctgcacatt 25860
gtgcacatgt accctaaaac ttaaagtata ataataataa attaaaaaaa aaaaaagcag 25920
ttggagctct ggtgtcaccc ccatggcagt ttccagtaac atcacacctc gttagcctat 25980
gcttctaaaa tttgacccag tgcccagctc agagacacac tgccttggga actgtccctg 26040
ctggttccct gttacaagta acaaaatccc attgctaaat cctccttggt tatggtcact 26100
gggtgatcat tgggtgatac caatattgag gcaggagaat agggtctgga cacagggaac 26160
ctaagcctgt ttcacaccga cttcctagaa ctaaattgaa ggcagaaccc tacctttcca 26220
tgcctaagta acaaaaggac cacaggctac tccctttgca acccccctcac cttttctgct 26280
aggcagatgg gaaattggct gtccacaacc aatcagattg attgaaggtc cagtctttgt 26340
ttgccacttt gtaacttcac tccagcctct gaatggctgc tgtccacaac caatcagact 26400
gattgctggc cacatcttcg tttcaataga agtataactt tgtaacttca ccctagtctc 26460
tgattggttg aacaggagtg taacctttgt aacttcactt cagcctctgg ttggctgctt 26520
tctgtaacca atcagactga ttgcaggcca ccacttcatt tacatgaggt gagcatgatg 26580
tggccaatgg gaaacttcta gaggatattt ggacccaaga agattccgta tctgggccct 26640
tgagctgctg ctcggtccac tcccaaacca tggagtgtac tttcgttttc gataaatccc 26700
cattttcatt cttttgttgc ttcattcttt ctttgccttg ctgggcattt tgtccaattc 26760
tttgttcaat aggccaagaa cctggacaac ctgcagtcac aaccctccac cagtgacaat 26820
atagtttaga tttgtgtccc cacccaaatc tcatgttgaa ttgtaatcct cagcattgga 26880
ggagctccct ggtgggaggt gactggatca tggggtagga ctttcccctt gctgttctcg 26940
tgatagcgag tgagatctca caagatctgg tcatttaaat gtgtgcagcc cctccccctc 27000
ctctctctct tcctcactct ctggccatgg aagacgtgcc agcttcccct ttgccttctg 27060
ccatgattga aagtttcctg aggcctccct agccatgctt cctgtacagc ctgtggaact 27120
gttagccaat taaacctctt ttcttataaa ttacccagtt tcaggtgttt cttcatagca 27180
ctgcagaatg gacgaataca ctcatggaga gacaggatcc acctgctgtg tggtaacatc 27240
ctgacccagc acatctgggg cccatcaagt ctccatgggg tggtgggagg agcattaaca 27300
acaaaggcag cacctggcac cttctgcggg cgatgggaag actgagggca ggaaaagcaa 27360
acatgctcag cactgtgctc agcccagggc gactctgaga caagagaggg gccagagccg 27420
gatgcagctg ggaggtggca gccttaccag aggtttgagg agtacatggg aaagtgcaca 27480
gagcccagcc caggatggca gctgtgctct cattttcttg cagcctttag gggctacctg 27540
gctggggtgg tggccctgct gaagagaacc tgcccctagc aggcatgggg gcaagagcac 27600
ctttcaaagg tgaacaaatg tgttccaatt tgcagcagca aagctgccag aggtcccagg 27660
aagcccaggt tcatctcatt tacctagcca tctctggcag cattggtatt tgagagcgtg 27720
tatgcgggca gaagagagga aaaagacctg caccagaaca cctttccaga acacccttct 27780
cccttgaaca cctgagtgcc tagagcccag ccccagctcc cagcaagccc cctccccaaa 27840
accactatag ccactgggcc tccctttggc aaggcctgag ggcccaaatg tggccaccta 27900
gcctctgggg acttccgtcc tttggagcta gaaaaacagt agctgaatgt gcctggctgc 27960
agcagggccc cgccgactca cctatagaaa ggccctgccg tggactaagc ctcccagcct 28020
aggaaacctg gctctggcct cccctgcagg catgtgatgt ttggctccag aggccttctc 28080
ctctgggctt ttccatgcct gtgaactggg ccccattcat ttctctgtgg tttcatggga 28140
acgtccaatg cattcaggag gttgcagtgc acccaggagg agaggggtca gcgagaggcc 28200
tgagctgtga ctggtgggcc acccagaggc cacggcaccc tctgctggag actggcagca 28260
gggtgcatgg ccagctgtgg gcgagggtcc atcagtcaag cagctacact tcctcccggt 28320
gcccctccct gacccaggcc aggggctctg cctgcagctg cctcactcca ggcctccact 28380
ttccagctcc caggccccca gccccacctg gcctggcccg ggacagagca gccaccaaga 28440
tcttttccac tttccctccc cagcagcctg caattcagtg ccctgcagac ccctgcctcc 28500
cggggccctg cggtttctac cacactacac tcaatttccg gccactaaga acacggcagg 28560
tcccgcgtaa aggtggccgc cacctgcgct ctgagggctg cccagccacg gagaagtggc 28620
tgtgctcggg cactctgctt ctgagacagg cccagcagct gccttcatgg cctcaggaga 28680

gcccacaggc tccaagcctg cagtaaggac ctgcctaagt ccttgaaaat ttggtgttca 28740
gaagaaatga aagtgaaact ggctgggagc aattcttttg attttgtttc aagacagggt 28800
ctcactcggt tgttcaggct ggagtgcagt catgcgatca tgggtcactg cagcctcaac 28860
ctcctgggct caagggatcc ctcctgcctc agcctcctaa gtagctggga caacaggcac 28920
attccaccac accaggctga ctttttttttt ttttttttttt ttttttgtag agatgggatc 28980
tcactttgtt gccaatgctg gtctcaagct cctgggctta agcaatcctc ccgccttgaa 29040
ctcccaaagt gctgggatga tgggatgata caccactccc tgcatgcaat acttaccaaa 29100
gttccacgtt agcagtttтc agcaaaagct aattgaccaa gctctgtgag tggcctcatt 29160
ccattagcag gagcctccca cagaatgtga cagaatggtc ctggtggctg agggtagaag 29220
gggctgcttc tcttaagtct ttgaagatga atgcagttca gctttggcca acagccatgc 29280
ccttctgccc aggcccagat caacttttaa tcatttccaa agccagtctg actgtcctgg 29340
gaaaggaagg gttggggtga atttcttatc aatttggcag gtacattgga tcctgtgagg 29400
agagtatgag actgtacgag gggtccctgt gctagcccca aatgagagcc ctgactccca 29460
cctacccagc ccacccgccc cgcactgctc agctcagttc tccgttccgg ggatggagtg 29520
ctgggcttgg cctgcacctt tctgtcccca aactccactg gggacccacc ttctagtcac 29580
cccagggtgc catcaccaga gccaggggct agccccacct ttgctcactc ctgctcggag 29640
cccacctctt ctctctgccc ccatcgctac ctgcagcatc agaaggactt gagggcacca 29700
aacagcccct gcagctgtcc tcaaacatca tggccaaggc tgcgcctggg aagtggactc 29760
tctgcggtgc cagctcccta ctcactgccc ttgacttttg tctgggtccc tgcttgatgt 29820
ggcccaactg gctgggccag agccccacag gcgctgtccc gacccccagc cccctagagg 29880
gagggagagg ctgagacggc aagggaagca gagactcagc cacaccaagg gccctggcaa 29940
ggtgggcctc tcctccaaag cctcaccagg cttcacgttc aaggtcacca agagtgcact 30000
tgttctctgt cgagggcaga ggtgactccg gggactgtgc tggggtccag ggagggcagg 30060
cagcggagtt gccagggaag cagcttgcct gaggtctgtg gtcttggcag gggcttccgc 30120
agcagcccca ccctctccct ttcccctccc tcctgtcctt gtcctcgtgt ttactgaaga 30180
ccatgagaag ggatgtggag agcccctgca ggaactgaga gcaggagcct ggctcagccc 30240
tgagaggccc ccagatattc agttcctaaa cccatagagg gtggggcatg ggcacagagg 30300
agtaaccagg ggccacctca cacagccctg ctctttcacc ctgcccgcct ggtggcctcc 30360
ttagcctgca gcctcagtgc tgcccgatct ggggccatgc tgcgtcctgc tggccacact 30420
gcaaaatgca gcttaaggtc ggcctggaag ctccaggtgt ccttcttccc ctaggcctac 30480
agctgggctg gaggggggaag gggcaccagg aaacagcctg gatgctcctg cccaggagga 30540
ttgtccgact ccatggggag aaagtccgtg cctggcacat ggtaatcttt gtggagcgag 30600
agggcaaaag tatgcatgat tgtgtgcatc tgaagcattt ctgtgctgat ggcctgaccg 30660
aaggcagatg acaaatcatg cagatatttc tgcagcagga atggctgcat tctcctggct 30720
cgcctgccag ggagctcaga ggtgcccttg cccgggaatc cgatggcaga gagttaccag 30780
aaggtctgcg gtgctcctgt tcctcggccc cggtgagagg tgacagcgtg ctggcagtcc 30840
tcacagcccc tcgcttgctc tcggcacctc ctctgcttgg tctcccactt tggcgtcact 30900
tgaggagccc ttcggcccac cgctgcactg tgggagcccc tttctgggct ggccaaggcc 30960
ggagccaact ccctcagctt gcagggaggt gtggagggag aggcgcgagc gggaaccagg 31020
gctgcgcgcg gagcttgcgc gccagctgga gttccgggtg ggcgtgggct tggcaggccc 31080
cgcactctga gcaggcggcc ggccctgccg gccccgggca atgaggggct tagcacccgg 31140
gccagcggct gcagagggtg tactgggtcc cccagcagtg ccagaccacc ggcgctgcgc 31200
tcgatttctc accgggcctt agctgccttc ccgcggggca gggctcggga cctgcagccc 31260
gccatgcctg agcctcccac cccctccatg ggctcctgtg cggcccgagc ctccccgatg 31320
agcgccaccc cctgctccat ggcgcccagt cccatcaacc acccaagggc tgaggcgtgc 31380
gggcgcacgg ggcgggactg gcaggcagct ccacctgcag ccccggtgcg gaatccactg 31440
agtgaagcca gctgggctcc tgagtctggt gggggcgtgg agaatcttta tgtctagctc 31500
agggattgtg aatacaccaa tcggcactct gtatctagct caaggtttgt aaacacagca 31560
atcagcaccc tgtgtctagc tcagggtttg tgaatgcacc agtcgacact ctgtatctag 31620
ctgctctggt ggggccttgg agaaccttta tgtctagctc agggattgta aatacaccaa 31680
tcggcactct gtatctagct caaggtttgt aaacacagca atcagcaccc tgtgtctagc 31740
tcagggtttg tgaatgcacc gatcgacact ctgtatctag ctgctctggt gccagatttg 31800
tctcctggag agaggcatgg gcacctgtgg tctccccgcc tcctggcctc cccttgggtg 31860
cccttatgca gaaagggtcc cggccccagg cttgcttggc tttggggact gttttaaaag 31920
ggacatgaag aaagaagaag ccagagaatg gtccttggcc actctggatg gagtgtccgc 31980
tgagcagtag gaagagaact gtccctggct tgtctccttc cctgagtgac tgttgattca 32040
cagttctctc tccaagggga catgggcctg tcctaatgct gccttagggg cttggctcca 32100
gctgaccctg gggtctgcag gtcaccacct gcccctgtgc ctggctttga atttcctaac 32160
atccagagtg ccctgggagt acagtgtcca gcccgttgtg tgtagtaaac cgggagctga 32220
gcagaagagg aacgacagag tccacccgtt gaccctcagg gctgtgtgtc ctgaagttca 32280
agcctagctc accctgcagt gggtccagcc ccacctgtac tgacagatgg caccagcagg 32340
gagcgcagtg ctccactgcc acagttctct gtccccactt cagtgcagtc agccctggac 32400
cccccaccgc ctgctccctg tagcacacac agccacaggc cctcccagct cccgcccctg 32460

gcccttggtc actctcacct gctgcctcag ccgaaggtag ccggtagggc ctccctgaag 32520
ctccctccag ccagacaggg gtgggccagg gctgagggcc aagggccgcc tccaagcagt 32580
gaagccctcc agggtggaag ggcaggtggc cccctctgtg tcccgttccc ctaagtcccg 32640
gcgagccctc cccttcctcc tgcggtgccc tctgccctca tctatgtgcc ctggtgggct 32700
cccccagcac tgcagcctcc cgggtggggt ttcaggaccc ccagggcctc ccagctcact 32760
cagaccccca ccccccttcct gtagctctgc tctctggcac caccttccct ctcttgggga 32820
caaccacagt ggagagaggc ggggctctct gcctgtccct ctattgcagg ggtgctggcc 32880
ttctggggtc cttttgagaa cttgatgaaa gcaatgagtt tacacccaag aaattctctg 32940
gcaccgtttg caccaacaac atgccccaaa ggtggagcca ggccccccagg ttgcattgtg 33000
taagtcttgg gagctctcag gatgcatcag ggacacgtgg cctctgactc gctcagctct 33060
gccctgaccc agggcgttca tcctggagca ggcctccgtt actgactggc gagcagaggc 33120
ttccagaggc tgagggaggg gcctggggtc ctcctgcagg gaccaagacg gagctgcgcc 33180
tcaacatcag gccctgccgt ccttgtctcc tcccagccgg gctctgtaca ggtcatcacc 33240
gtcttcagcc tgctggaggg ggtcctgcgg gcagccatgg ccctctagta tagcgctgtc 33300
ctgaagcggc caggcaccca gggccacctg ggccccgcgg gggaggagga ctgaggctat 33360
ctggccctgc tggcttttag aaataggaac tgttgatacc aaggggaatt tttaattctg 33420
tttttaaaat gtttaaattt ttctaactta aatttaatgt tttaagtttt taaatttaaa 33480
tttaattttt ttttagaaac agggtctcgc tctgtcactc aggctcaggg tatggtggca 33540
ccatcgcagc tcaagtagct tcaaactcct gacctcatat agtcctcctg cctcagcctc 33600
ccgagtagct ggggctgcag gcctgtgcca ccatgcccag ctgtttttgg gtttttgctt 33660
tggaaaaatg ggatttcgct ttgttgccca ggctggtctc aaattcctca tctcaagcaa 33720
tcttcttgct ttggcctctc aaagtgctgg gattatagat gtgagccact gtgcctggcc 33780
tgtttttatt tttatttttg gattttattt tatgtttgcc tctcagtttt taagcaaact 33840
gcaaggaaga cggtggggct agaaggaagg ctgaggcctg gccagcaatg gcccagcatc 33900
cccctgagtg gccaaccccc ctttccccca ctgccctcct ctgcccaaga aatgagggct 33960
tttcagtaaa tccatgtcag ggagcaaagt caagtgtgga gtgccatctg gtgtgtgggg 34020
cgcctctggg aagcctgggc agcggaatgc ccccttgcac ccagcgcaaa ggacccagct 34080
taggctccaa cccttgctgc tgagccgatg tcaccaccca gaaccttcct gtcagttcca 34140
gcacaattca gagctggctg cctggcagat tgatgctgga gtctcattct gcctgattaa 34200
aaatggaatt agtatgcagc actgagagcg cccccatcac cctgacacat gtgactatgt 34260
ccaaccctgc ccccacttcc tctctgcacc agctccgcag gacctggtag gggtcagggg 34320
tcctgtgaca cccactcctc gcagttcctc aagcagcact ctgtgaggtc ctgtgcccag 34380
ctctggtgtg agtgggtacc ctggcagcgc caagggagcc tggacagagg agccggcctg 34440
ggcctgggggg aggggaggag ggccctccag tgccttccaa accaggaggg gaaaccggct 34500
gctggtgaca cagcctggcc ccgttgacca cccagtgtcc caagcaccca cagatcccac 34560
ctgcctcggt cccgagcaga gctggccggc cactgggcag tcccttcccc agccagcctg 34620
accccagtct gcactccttc cccctccgtg ggggaagctc tgtggcttgg agtccccgag 34680
ggctgccaga aactaggatg aaagccatgg tgagcacggc ctctgttccc ccgcaccatt 34740
tcctggggtg tccggattaa caagctcatt tgatctggtt acagtgaatt ttcttcaaag 34800
aaacactcaa tagggtcctt gtcagagtgc ctcgcagcga cagtgactgg gtatggctgc 34860
ctttgttctg ccaccgtcag acggggctgg ctgtgggagg cgaccaaaga catcccgcac 34920
ctgccctggg agcctttccc tcctccaggg ctcagccacc tcaggcggcc ttcagtctgt 34980
gtgtcctgcc acccccaaga tgtcccagag gccacggtca ccccatctgt tcctgtcccc 35040
agaaccttct cctggagcca agtatctgca gggacagaca ggcgagcgtc tgggggtttg 35100
gtgttggggt ggagaaggct gtggggtgct gccccagccc aggcagcctg actgtgagag 35160
ccccaaacag gagacatccc agccccttcc cctcccctcc acgctgtggc agtgggtgct 35220
gttgatgtgg ggcacgttct tggcttgtgc atttctcgga tgaactgcat ctgttgccag 35280
tagaaagatg ctcacatgtc tttggctcaa gatcgacact gcctttggct caggttggga 35340
catcaactat tgctacagag cagtaatggt taaaaataag attttggaat ttattaaaat 35400
atttgtggct gggagcagtg ggtcacacct gtaatcccaa cactttgggg gaccgaggcg 35460
ggtggatcac ttgaggtcag gagtttgaga ccagcctgac cagcatggtg aaactccatc 35520
tctactaaaa ataataaaaa ttagccgagt gtggtggtgg gtgcctgtgg tcccagctac 35580
tcgggaggct gaggcaggag aatcacttga actcgggaag cggagcttgc agtaaattga 35640
gattgggcca ctgcactcta gcatgggcaa cagagtgaga ctctatgtct aaaaaaaaaa 35700
aaaaaaattt gtaattgttc aaatacagtt tagactagga ttgacatgta aaaattttgt 35760
gagaggataa tacattttgt tttctccatt gtatgaaagc atttattgaa aatcaagtga 35820
catcttttac aagggaaaaa gtcacttgtt ctttaacata cagtttttt tcttagttct 35880
gaattagaaa tggcatctgt tttaggtctc aagatataac ttggctgttc cttactgtgt 35940
atgtatgttg ttttctgtag gtatagataa ttatatatag gccctgtacc aaatgggagt 36000
gatggtgtat ttaataactc tttaatacct tatgttacca aatataaagg ccaggcgcag 36060
tgggtcacac ctgtaatccc tgcactttgg gaggccgagg tgggtggatc acctgaggtc 36120
aggagtttga gaccagcctg gccaacctgg tgaaaccctg tctctactaa caatacaaaa 36180
attacctggg catggtggca ggtgcctata atcccagcta cttgggaggc tgaggcagaa 36240

gaatctcttg aacctgggcg gggggaggag tgggggggcag aggttggagt gagcctagat 36300
ggcactgctt cactccagcc tgggcaaaag agcgaaactc cttctcaaac acacacacac 36360
acacacacac acacacacac acacacaccc tttctctgtt gctcaggcta gagtgcaatg 36420
atgtgatcat agctcactgc agcctcgacc aagccgactc aagtggactt cctgcctcag 36480
cctccctggc agctgggact acaggtgcat gcacaaccac cacacccagc taattgtaat 36540
tttttggaga caaggttttg ccatgttgtc caggctggtc tcaagctaat gggctcaagg 36600
gatccttcag ccttgtcctt ccaaagtgat aggattatag gcatgagcca ctgtgtctgg 36660
ccttccttta aaaattttga aaacttggcc aagcttggtg gctcatgcct gtaatctcag 36720
cactttggga ggctgatgtg ggcggatcat ttgagatcag gagttcgaga ccagcctggt 36780
caacatggtg aaatcccgtc tctgctaaaa atactgaaag tagccaggtg tggtggtggg 36840
cacctgtaat cccagctact cgggaggctg aggcaggaca atcacttgaa cctcaggtgg 36900
aggttgcggt gagccaacat tgagccactg gattccagcc tgggtgacag atcgagacgc 36960
ttatctcaaa ttaaaaaaaa ttaaattaaa atttgaaacc aggggaccaa gttctgttga 37020
agacctggaa attccagtag gctgaagatc agtgcaacca ccgtggtcgg ccctgttgag 37080
gtgctgctga gcacccactc atctgtgggt gctgcggatt tactacactc agataaagcc 37140
agtgtttctg gagttcctcc aggggaaact ggtagagttc aaagcccagc caaagaccct 37200
aagaaatcat aaagggaaca tacgcttttc tggctgttac tgttctccag cgccttcttg 37260
cctctggatg gaaggacagc tcactgctta gtatttcaca agctcttgct tcatccgcca 37320
actcatccac tgttggatgt gtcaccgaag ccaatctgtc ctggatcaca gcgacccgtt 37380
aacccaacag ttcacagctt tttgcatgtc cctatctgaa catccaaaga cccctaaaag 37440
aattgtggac tggactgagt actccttacg tggacccttt tagggaccac gaagcccccg 37500
tttctattgg gcatcccagt tgggctattc ccttaccctt gctaaaagaa ggcgagctcc 37560
tcttttccct tgatggtgag ccagagagca ctccatctga tgggcaggcc ttaatgagtc 37620
aggaagtctt tcgggcaggt gtgactttgc ctggatgtag taataaccta actgattcct 37680
agttagaaag gacagcctta gtgactactg ctacccaaga cacagacctg tgctcctgag 37740
ggctgcccta tggatcaaag caagctaaat ggcggctgct atggctgccc agcaagtccc 37800
tagactcctt agctggagta gttttattat tattattatt attattatta ttattattat 37860
tattattatt atcgagacag agtctcgctt agtcacccag gctggagtac agtggtgcaa 37920
tctcggctca ctgccacctc tgcctcctgt gttcgagcga ttctgctgcc tcagcctccc 37980
atgtagctgg gattacaggc gtgtaccacc ataaataccc tgctaatttt tgtattttta 38040
gtagagatgg ggtttcacta tattggcgag gctggtctgg gactcctggc ctcaagtgat 38100
ccgcccacct cagcctccca aagtgctggg attacaggcg tgagccacca tgcccagcct 38160
ggagtagttt tagataaccg catagctgtg cactgtttgc ttgctgaaca aggggagtgt 38220
gtggaatcgc cagctcgtct tgctgttccc acagtaatgc atcaactgaa gtggacatgt 38280
atgttgaaat gacaagacag caagcctcct ggtggcctag actgcttttc aggagtatgt 38340
ggggtttttt ggttgttgtt ttgttttgtt ttggcagggt ctcactctgc tgcccaggct 38400
ggagtagagt gacacaacct cagcttactg cagcctcgac ctcctgggtt caagcaatcc 38460
tcccacctca gcctcccaag tagctgggac tacaggcata tgccaccatg cccagctaat 38520
ttttacattt tttggtagag acagtgtctt gccatgttgt ccaggctggt ctcaaagtcc 38580
tgggttccag caatcaaccc acctcggcct cctataaaga cgtgagccac tgcaggaggc 38640
tgaggcagga gaattgctga catatccagt ttcttagaaa aaaaacattt aatagagact 38700
tacaaacaga agctatgtct gggtctcagg tggcagtgag acaagatggt agctttaccc 38760
cccaagacca agggccacag gggaggggtg acctcaaagg gatgtgtagg acaattgaaa 38820
tatgataaca tcaaagttgt tttgtcctaa gggcaggatt tatgggaagt aggtgctccc 38880
gcactagaaa cacgacatga atgggaaatc tcagaggccc tccgagaact ggcattcatc 38940
aacctggtag atcaggcccc aagatggaat tgccttgaca cccacaccac ctgaaataat 39000
ctggagtact gttggcagct gatgtgagac tttggttctt gtcttcttag cttaaaataa 39060
tttaaacaag agacacaaca gcaaaggaga tgcagcatac aataattttt gcaaaagaaa 39120
aagaacatct tgaaagtgaa gtgcagaata ggcagagaga agaattcagg gcaggctgct 39180
cataaagatg agacagcaaa agttggcact agggaggctc cctttatgga aatcttacat 39240
gattattcat gaggggttgg gaagaggtgt tgctagtaag catgttctgg ccaaaagcta 39300
ttaaaagaaa aggagtgtca aaaaatttag gccgtgctgg gggtggaggc tcacacctgt 39360
aatcacagca ctttgggagg agaggcttaa gcccaggact tccagaccag cctgggcaac 39420
atggtgaaac cccatctcta ccaaaaatgc aaaaattaaa tgggcaaggt ggcacacacc 39480
tgtagtcccc actactcggg aggctgaggt ggaagaatct cttgggccca ggaggttaag 39540
gctgcagtga gccgtgattg ccccactgca ctccatcctg ggctacggag caagactctg 39600
tctcaaaaaa caaagtcaat ggttcccttt ggtggggaag gaagaagtgg ggtttgaatg 39660
gggggcaggg tacatatggg gagatcctgg ccgtagtcaa tttcttgatc tgagtggtat 39720
tactttggcg ttcaattctg taactcttct ttaggccata tctttctgtt ttctgcagtt 39780
ttaatgtttg acatatctca aaaggaaaga aagaaaagga aggaacaagc ttgccatttg 39840
atccagatta gatgcaactg ttccagctgc gttttccatt ttcatctcag ccagtatttt 39900
tcaaaatgtg acatgcacgt atttccaaag ggcggtactg aaacaggata ggtaatcaag 39960
gaagtgaccg tgttcttggg atgcagcaag cgtggtgacc gcacagtcaa cacaataagc 40020

ctcagcattc gaattgtaat tgagctcatt caagcaaagc tatcttcagt ggggactttt 40080
ctttctagag agcatgcgca ttttgatttt acctatcctc aaactgaccc tttgctcatt 40140
ataatagtaa aaagcgcacc ccgggtggag atttaagaag ctaatgagac ctgcgacata 40200
cgagccagca tgtacagcta ctcacgcctg taatcccagc gctttgggag gccgaggtgg 40260
gcagatcact tgaggtcagg agttcgagac cagcctggcc gacattgtga aaacccatct 40320
ccgctaaaac tacaaaaatc agccaggcgc agtggcttac gcctgtaatc ccaacactgt 40380
ggaaggccaa ggcaggtgga tagcctgagg tcaggagttc gagaccagct tggccaacat 40440
ggtgaaaccc catctccgct aaaaatacaa aatgagtcag gtgtggtagc aggtgcctgt 40500
aatcccagct actcgggagg ctgaggtggg agaatccctt gaacctggga ggcggagcag 40560
tgagcagaga tctcaccagt gcactccaac ctgggcgaca gagcgagatt ccgtctctaa 40620
aacaagtaaa taaacaaaaa taaaaaaata aaaatacaaa aactagctgg gcgtgctggc 40680
gggcgcctgt aatcccagct actcaagagg ctgaggcagg agaatcgctt gaacctggga 40740
ggtggaggtt gcagtgagct gagatggcgc cactgcactc cagcctgggg gacagagtgg 40800
gactccatct caaaaaaata aaaataaata aataaattaa ttaattaatt aataaaataa 40860
aatagaaaca gggtcttgct atgttgctca ctatgtggtg aatttttca ggtgctgagc 40920
aagactggag accagacaca caccaatgtc acttgcagta aacaaaggat atttgtccac 40980
attcaaagtc tatggtgaca ccctggccac atggggatgc ttggccaccc tgcctcctac 41040
cttcatgcca gagtcgcctg tcataatgtc tggttacagc ccttcctctg aggtccaggg 41100
atttcaaagc agaagcagca ggtcttcccc ggctggagga agagccaaag cctccattcc 41160
tgggattctt ggttgctgtt acctggggca aggggaggcc caggctgtgg cgtgtattct 41220
cagaggattg gtcgtcttgg tccttctgtt tcctgggaag gaagggctgg tcctgtaggg 41280
ccccatctag atcccttagc accctctacc acctgatgcc cttggggata ccaagctctg 41340
tgcagtccag accatgttcc agctcagtgc ccaccttaca ggcatgcgcc accatgcctg 41400
gctaattttg tatttttag tagagatggg gattatccat gttggtaagg ctggtcttga 41460
actcccgacc tcaggtgatc cacctgtctt ggcctcccaa agtggccggg cagggctgaa 41520
ttcgcccccc caccagctac tgccaaccac ggatgaatgg cttctgcctg cctcctgccc 41580
tccagatctt accagggcat ttcactggga aatatggcaa cagcccttgc cactcagggg 41640
acagcatggc aggggctggg aacgaatgtt gttgccaaac gacaagaccc agctgggccc 41700
agtggctcac acttgtgatc ccagtggtct gagaggctga ggcaggagga tcacttgaag 41760
ccaggagttt gagagcagcc tgggcaacac agtgagactc tacaaaacaa aacaaaaaaa 41820
attagccagg catggtggct ggtgccaata agcccagcta ctggggaggc tgaggctaag 41880
gctgaggcag tgagccatga tcatgccacc gcagtccagc ctggtgacaa atgagaccct 41940
gcctcaaaaa aaaaaaaaaa aaaaaaaaag aggaaggtga gcgcagtggc tcatgtctgt 42000
aaatccagac actttgggag gctgaggtgg aggttcgaga ccagcctggg caacatagca 42060
aaaccatgtc tttacacaaa ataaaaaatg agtcaggtgt ggtggcacat gccattggtg 42120
ccagctacgt gagaggctga ggtgggaaga ttgcttgagc ctgggaggtc cgaagctgca 42180
gggagccgta actcaggcat cacactccaa cctggctgac agaatgggac cctgtctcca 42240
aaaccaaaag attccagctc gaaaaataat tgtggggtgg cggcaaaagc tcctgactgg 42300
ccttgacttt agagtgaatc aatgaattaa ttaagggcct gcctgttagt gagtctcctc 42360
tgaaatttag cccagaaatt tcctaactca gcaagatgaa gcaggaggta gaaggaacta 42420
agggggcaat aagcaggagg aaggaatgtc cccatgaggg tgacatcttc cctgagagcc 42480
ccaggacgac cagcaggaag ccaggcgggg ggcaggcagg aggactccag aaagctcggc 42540
ctgaggggag gcccgtgggg gtggtgggga gtggtgcggg gaaggcagag gctgagcagc 42600
aggtgaggtc ccctgggttt tgggggccaa gcctggggct cggggcgagc aagcatgagt 42660
ggagaagggg ctgctgtggt tgggctgggg tggactcccc acctgcgtcg tccaaacatt 42720
agtgcgagtg cacccacaca aacacataca caatcacaca caacatgtga gcaatgggca 42780
ggactggtcc ggccccactc agtgctgtca ccattggccc cacagctgcc cacagcccta 42840
gagctctggg cccagattcc tgccagcccc acctgtccag gccaaggtaa gatgatggag 42900
caaggggtg ccagggcagc aaagcccccc acgtgcccct ttcccacagg gcccaggctc 42960
ctggcatcag gaggctgaac ccaggccctg gcccagactg tgtgcttcca gcctcccctc 43020
ctctcgacac cagaacacag cctggcccca gcttctggga aatatagaaa aaaatgggtg 43080
aatgatccag tgacagggtg tcttgttcca cacaagacac agtgagcagg ggttggggga 43140
ggggctcctg gctgcgggag gcacaccaca ctcacccaaa tggcatctgt actcaatacc 43200
gcacccttcc ctgggggaca cctggtccca acctgagctg cctttctcag gaccccagcc 43260
ccagcccggc ccagcccagc cacaccctgc cactcccttc agccagtgtg gcttcaggtc 43320
aagaggctgg gcagggtcaa ggtggcaacg aggggagaag ccgggacaca gttctccctg 43380
atttaaaccc gggcagcctg gagtgcagct catactccat gcccagaatt cctgcctcgc 43440
cactgtcctg ctgccctcca gacatgctgg ggccctgcat gctgctgctg ctgctgctgc 43500
tgggcctgag gctacagctc tccctgggca tcatcccagg taatgaggct ccccgagctg 43560
cccctacaca acacacacac agggcacccc ccagcccagg ctgacctgat ctttgctctc 43620
cccctggcca gttgaggagg agaacccgga cttctggaac cgcgaggcag ccgaggccct 43680
gggtgccgcc aagaagctgc agcctgcaca gacagccgcc aagaacctca tcatcttcct 43740
gggcgatggt gagtgagcca ggccttccag ccctgcagcc ctcacagccc cggcgcccgg 43800

accctcagtg gttccaggag agccctgggg cccaagcctc acacatttct gttccttcag 43860
ggatgggggt gtctacggtg acagctgcca ggatcctaaa agggcagaag aaggacaaac 43920
tggggcctga gataccctg gccatggacc gcttcccata tgtggctctg tccaaggtaa 43980
gtgctgggct accttagagt cctccaagca cagaagggga atcctggcta tggagtgtgg 44040
taggagggag ggaccctaaa cagctggggc tccagtaagg agttagaggc agttggaatc 44100
ccagaggaca gagatcaggg tctgggtctc cgtgtctgcc ccagagaaga gctcagagtg 44160
tctctgtccc cagacataca atgtagacaa acatgtgcca gacagtggag ccacagccac 44220
ggcctacctg tgcggggtca agggcaactt ccagaccatt ggcttgagtg cagccgcccg 44280
ctttaaccag tgcaacacga cacgcggcaa cgaggtcatc tccgtgatga atcgggccaa 44340
gaaagcaggt gagctggggc ccgctgctgg gtcacggcca ggtcacagac gttggtcaca 44400
tatactgacc tctgacaccc ttagggaagt cagtgggagt ggtaaccacc acacgagtgc 44460
agcacgcctc gccagccggc acctacgccc acacggtgaa ccgcaactgg tactcggacg 44520
ccgacgtgcc tgcctcggcc cgccaggagg ggtgccagga catcgctacg cagctcatct 44580
ccaacatgga cattgacgtg cgacccccag gccaagggct ggggctgggc agagagtagc 44640
agggaggggg cactagctca gacccaggca accaaaagcc ttatctgggc cagcagggtc 44700
tggaggtggg gttgtgggcg tagaaggtgc agcccaggct gggccattcc cacagccttg 44760
gggaggggag tcaggggctg tgcatgagga gggggcacgg ggccagccag ggccccaaat 44820
ccacctgccc catcctctgt tcccaggtga tcctaggtgg aggccgaaag tacatgtttc 44880
ccatgggaac cccagaccct gagtacccag atgactacag ccaaggtggg accaggctgg 44940
acgggaagaa tctggtgcag gaatggctgg cgaagcgcca ggtgatgggg gctggcgggt 45000
gcaggggcca cagcaggggg agggcagagg tgtggggctc agggctgtgg gctgaggcct 45060
ggctctctcc ctccccacag ggtgcccggt atgtgtggaa ccgcactgag ctcatgcagg 45120
cttccctgga cccgtctgtg acccatctca tgggtaatga ccccccttcct gccctggcat 45180
ccctcagatg gcctcagatg gcaccttctg agcctgtgtg cacatccgcc agcacccgcc 45240
caccccagc ctgccagtca ccacaggacc ccttgtccca caggtctctt tgagcctgga 45300
gacatgaaat acgagatcca ccgagactcc acactggacc cctccctgat ggagatgaca 45360
gaggctgccc tgcgcctgct gagcaggaac ccccgcggct tcttcctctt cgtggagggt 45420
gcgtggtggc ccctggggag tgggggttgg gggttggagc agggcaggct cagcatctcc 45480
cccctctggc cttcctgcag gtggtcgcat cgaccatggt catcatgaaa gcagggctta 45540
ccgggcactg actgagacga tcatgttcga cgacgccatt gagagggcgg gccagctcac 45600
cagcgaggag gacacgctga gcctcgtcac tgccgaccac tcccacgtct tctccttcgg 45660
aggctacccc ctgcgaggga gctccatctt cggtaggcct ggggagagtg gcaggtgctg 45720
ctgcagcaat taagtgggtg aaatctgagc ctcagtctcc tcctctgtca aatgggagta 45780
atgctggcac cagccctgta gggtctcctg aggactaagc ccctgaccag gcaaaacgtg 45840
gcggtgccta gcacgtggga gacactccac agctgtgttc agctcaacca cagggacccc 45900
tctctctgca gggctggccc ctggcaaggc ccgggacagg aaggcctaca cggtcctcct 45960
atacggaaac ggtccaggct atgtgctcaa ggacggcgcc cggccggatg ttaccgagag 46020
cgagagcggt gagtgccgcg gggtggcccc ctgaggggga ccagggtgcc aaggatgggg 46080
ggctggcggg aaggggtcac ctcctgtctg cctggaactg aatgaaccct cctaccggaa 46140
ctgaaccctc caaccaggga gccccgagta tcggcagcag tcagcagtgc ccctggacga 46200
agagacccac gcaggcgagg acgtggcggt gttcgcgcgc ggcccgcagg cgcacctggt 46260
tcacggcgtg caggagcaga ccttcatagc gcacgtcatg gccttcgccg cctgcctgga 46320
gccctacacc gcctgcgacc tggcgccccc cgccggcacc accgacgccg cgcacccggg 46380
gcggtccgtg gtccccgcgt tgcttcctct gctggccggg accctgctgc tgctggagac 46440
ggccactgct ccctgagtgt cccgtccctg gggctcctgc ttccccatcc cggagttctc 46500
ctgctcccca cctcctgtcg tcctgcctgg cctccagccc gagtcgtcat ccccggagtc 46560
cctatacaga ggtcctgcca tggaaccttc ccctccccgt gcgctctggg gactgagccc 46620
atgacaccaa acctgccct tggctgctct cggactccct accccaaccc cagggactgc 46680
aggttgtgcc ctgtggctgc ctgcacccca ggaaaggagg gggctcaggc catccagcca 46740
ccacctacag cccagtgggt accaggcagg ctcccttcct ggggaaaaga agcacccaga 46800
ccccgcgccc cgctgatctt tgcttcagtc cttgaatcac ctgtgggact tgaggactcg 46860
ggatcttcag gacgcctgga gaagggtggt ttcctgccac cctgctggcc aaggaggctc 46920
ctggggtggg gatcaccagg gggattttga cacagccttc ggctgccccc cactaagcta 46980
attccacacc cctgtacccc cccagggggc cctctgcctc atggcaaagg cttgccccaa 47040
atctcaactt ctcagacgtt ccatacccc acatgccaat ttcagcaccc aactgagatc 47100
cgaggagctc ctgggaagcc ctgggtgcag gacactggtc gagagccaaa ggtccctccc 47160
cagacatctg gacactgggc atagatttct caagaaggaa gactcccctg cctccccagg 47220
gcctctgctc tcctgggaga caaagcaata ataaaaggaa gtgtttgtaa tcccagcact 47280
ttgggaggcc gaggtgggcg gatcacgagg tcaggagatg gagaccatcc tggctaacac 47340
ggtgaaaccc cttatctatg cgcctgtagt cccagctacc caggaggctg aagcaggata 47400
atcgcttgaa cccgggcggc ggagattgca gtgagccgag gtcatgccac tgcactgcag 47460
cctgggcgac agagcgagat tctgcctcaa aaataaacaa ataaatttta aaaataaata 47520
aataataaaa ggaagtgtta gacaatgtaa tgccagtact acttcctagg aggaaaatca 47580

tgagtgcctg tgggcacagt gtctggaggg gtggataacg caggccagga ggggctgctg 47640
aggagcagat gattgagcag gagacctaaa cagagtgggg cttgagcaag gcagaacagc 47700
agtgccaagg ccctggggca gcgccagcag gtgctctggg aggccaaggg ctggatcaga 47760
gggtgggtgg gtagaggggt aaatctgagg gtcaagaggg tgggtagtgt tggggagtgt 47820
gaagtctgag tagagggatg tggttggagg tctttaagga gtgctgtgac ccgccctggg 47880
tggaaaataa gtattctggc tgctgccaga agaagggtct tgtcttttgg gtggatggtg 47940
ggggtggtag agggtagcag ggagaggtga gaactgggga aggaactgac tccaggtgtt 48000
tctgatctcc gtccgaaagc attcgggagc acccatccca acacagccat gcttggtgag 48060
taccacacct gccccaaaag aacattgaaa agaatttttt ttatttgagg cagagcctca 48120
ctctgttgcc caggctggag tgcaatgacc ttgtcttggc tcactgcaac ctctgcctcc 48180
caggttcaag ccattatcct gcctcaccct cccaagtagc caggggtcaa caagtgtgca 48240
ccaccatgcc tggctagttt ttgtattttt agtagagacg gggtttcacc atattggcca 48300
ggcaggtctc caactcctga cctcaggtga tccacccgcc ttggcctccc aaagtttggg 48360
attacaggtg tgagccacgt gtctggccga aaagaattaa aggtgaaatc agccacattt 48420
tccagcaaag tttacactat tacaaaaaat acaaaaatta gccaagcctc gtggcccatg 48480
cctgtggtcc cagctactca ggaggctgtg gtgggaggat cacctgaagt gaggagtttg 48540
agaccagccc agccaacatg gtgaaactaa aactggtcta aactaaaaca cggtctctac 48600
taaaactaca aaaattagcc gggcgtggtg gtcggcacct gtaatcccag ctacttggga 48660
ggctgaggca ggagaattga ttgaacctgg gaggttgcag tgaattgaga tcataccact 48720
gcactccagc ctgtgcgaca gagccactct gtcttaagaa aaaaaaaaaa gcaagcattt 48780
tgtgctcact agaaatatta gcatgattga atgcttcctt gcatatgaaa attattttaa 48840
cattgtaaaa catctatttg gcaggcatgg cggctcaaca cctgcaatca cagcactttg 48900
gcaggaagag cgggtaggat cgcttgagtt caggagtttg agaatagcct gggcaacata 48960
gtgagatccc gtctctgcaa aaacaacaac tgagtccagg gaggtcgagg ctgcagtgaa 49020
agaagattgc tccactgcac tctagcctgg gcaacagagc aagaccctgt ctggaaaaat 49080
atatacatgt atttgaggac ctggctctct caggacagtt ttttttcttt tctaattcta 49140
ggttttagtg gctgtcataa aaatatggga ggtgaacaga aggtagacac cattagctgg 49200
ccttactaaa tcatcatact cattgttaca ttccatccac caaatatgca aaggttttgg 49260
taaaatccag ctagtgtatt tctatcttcc cagttgtcag tgggttagaa agttcctctt 49320
tctaaccaat gtggaggtgc tgcatgttta ggttttacat gagtgctcac acccaaggac 49380
ttctatattt taaaagtgaa gacattttaa aaacagatta ttctggccag gagttgtggc 49440
tcatgcttgt aatcccagcc ttttgggagg ccgagacagg cagatcactt gaggtcagaa 49500
gtttgagacc agcctggcca tcatggtgaa atcctgtctc tactaaaaat acaaaaatta 49560
gccaggtgtg gtggcaggca ctcgtaatcc tagctactca ggaggctgag acaagagaat 49620
cgcttgaatc cgggaggcag aggttgcagt gagccgagat cgcaccattg cactccagcc 49680
tgggtgacga gagtgaaact ccatcccaag aagaagaaga agaaggaaga agaagaagga 49740
agaagaagaa gaagaagaag aagaagaaga agaagaagaa gaagaagaag aagaagaaga 49800
agaagaagaa gaagaaggag gaggaggagg aggaggagga ggaggaggag gaggaggagg 49860
aggaggagga ggaggaggaa aagaagaaga ggaggaggaa gaggaagagg aggaggaaga 49920
agaggaagaa gaagaagagg aggaagagga agaggaagaa gaggaagaag aagaagaaga 49980
aaaagaagaa gaagaagag 49999

<210> 18
<211> 49999
<212> DNA
<213> Homo sapiens

<400> 18
gaaaaagatt attctgaaat taggtcattc tgttctcaag cttccttttc ctgtgtaggt 60
atgagtgttt atgagtctaa tacattgttt accccaaaat caagtgtcaa ataaatattt 120
tcaaacttct gctcaaaaat ttgctctttc cttagcaaga gttttgtttt gtttgagaca 180
gagtttcgct cttattgccc aggctggagt gcaatggcgc gatctcggct cactgcaaca 240
tctgcctccc gggttcaagc aattctcctg cctcagcctc ctgagtagct gcgattacag 300
gcacccgcca ccacgcccag ctaagttttg gtatttttag tacccaaagt tgatgagtcg 360
acctgctcca cgcgtaattt caaggtggtc acgttggggt cacccccttgc agcttgtagc 420
tgctgtgaac gccagagaat gaagtactca gacaattcca gctgagtggg gcaggcggca 480
actcctctga gagagtgccg ccccaaaatc catccgccaa gtatttatta gaaggcttgt 540
taaaccacaa acatccacca gatgggtttt tgccgtgggg tcatgaggca catacggcct 600
tgtaaaagca ctcagaccac attcctagga ggctgttttc agcgctcctt atcacacatt 660
ccactccttg tcctgttttc agtgtcaagg agttacattc tcacgcacaa acaacgtaca 720
cacagtgcct cagtattttt ccatgcctcg agctcaaatg ccttgtacat aagtttgaat 780
atatcgtcgt gcacccccca catctccccc ttctttaatt cttagagctt gctggttatc 840

caacgcaaaa taagcttcta tccttcttcc ctggtcatag atgcttcggg tggcagcaca 900
gagccattta cagaagccta gcaatcagat acaaaaaaga atatagcggc catcacccta 960
gcaatcagat acaaaaaaga atatagcggc catcacccaa atgcgtatgt ttaacccaga 1020
caaccaagta ttcgggttca gtcattgaaa gccttcttgt aattgctgaa gggtatttgt 1080
ttgtaattgc tgcgagacca ttcttcaagt tgtttcttca actagacctc aaatgctttg 1140
tacataagct tgaatatatt gccgcgcacc ccacccgctc cccactgcct gccagagggc 1200
tgggaaatgg ctgcaccgct gaacaccgca gttaccccgg ggaaattact tatgacctcc 1260
tcccgcgcgc tgccactgtg cgctccctcc cctcccctgc tttcccttcc tctcctctcg 1320
cgcaccctcc tcccgccctc agggacccct gggcaaggcc actgcgcccc gggtctacgg 1380
cagctggcgg ggcgctcaac gcgcgcactc acacggacga cgtagcgcaa agagttcctg 1440
tcgtccaggc tgaccataag cgagaagagc gcggcggcgc tgtacacgcc ctgcactttt 1500
ttacagcagc cagttgaggt cccatcgcgc agcaaccccc cggcgctccg ccgcgccgcg 1560
caggtcccag cccccgcagt cctcgatgac ctccagcatg agcagcgggt tcagtcgttc 1620
gatctcgcgc atctcgaggc acaagcggaa gaaggagcgc acctagtgct gggcagcgcc 1680
gccgggtcca cccttgggcc gagccagcag gcgccgcagg cgctcctcgt tctgctagcc 1740
gatggccgcg atggtgccgt aggtgagctt gtcgtcgggg atggcatggc gccgcagcca 1800
gccgccgcag gcgaacgagt ataagtcctg gcatgggtcg atgctggcgt ccaggttggc 1860
ggccaagaag cgagcggtgc acgcgaagtc ttgcgctcag gacagccttc aggacaggct 1920
ccgccgccgg ccgcgaccgg gcccaggtac ttgagcacca gcatagccgc caggatggag 1980
cagaggccgg ctgcaaacac cagcccgaca gcaggttcaa cttgcgccgc ttccagagct 2040
gcagcccggc ctgggcccgg tggcctgcgg gcagaaagtc cccgcaagcg ccccccgcgc 2100
cgcagtgact cacatacttg acctcctgga actcatcgta gtgcgccatc agcgaatacc 2160
aggactccat ggcgccgagg ccgccggggt gcagccctgg gccacctggg ctacgggatg 2220
cgcgtggccg ccggcctcct cgtgagcctc cgcgtggccc ctggggcctc agctgcggga 2280
aggacagagg caggctaatg agacgccgca gcccgacggg gttccggggc accgcgagga 2340
gagacacagg cctgggtgca gaggccccag ccgcgagcct cattcactgg ggaaaccagg 2400
gaccaggagg gctcggcggg gccaccaccc ccgcgtgcac agtggagtct tctcccctgt 2460
ccccctccct gcacacacgt gcgggtccct gggttgggag ggccctgatg ggaaggggga 2520
ggagccaggc acggggcctg gcacgtagtg ggccttcatt gaaaggctgt ccctcttccc 2580
ttcgcctttc tggtccagga cctgccccag ccaaggccgg gcagaatggg ggtggggggt 2640
ggagaagcgg aggctggagt gaggaggtgg ggtcaggagc gcgtctatgc tgcactttcc 2700
gctttccgcg ctggacacag acagaggctc cacaaagcgg ccaaagaacc aaactttgtc 2760
cttgcggaag tccgcaggat ctaccactca accccgatcg ctggctcctt ctactcggtg 2820
gcccgacagc ccacccgctc cttccccagg ggcgagcgcc aacgccccag ggtcgtggat 2880
acacagccca ccccctggac ggccctgatg gagaccggct ccgtcccccc acccaccccc 2940
attcccagtc tgtgaccccg acccgagcca ctcccggctt caatacgttc tccccagaac 3000
ccaaacttgg gtgaagtttc acctcccgcg gggcgcaagg agacgaagcc gggaggctcc 3060
gcgcagcggc cgcgatggcg gcaacggctg cagggattcg gcgccattta ccccgcaggt 3120
gcgcactcga gcaggaccag gactagcggg cccgctcgaa accagagcct gagcctgagc 3180
agaactgcgt gggcagccgc tgtctcccag cgcccgctgc cttttctgcc gccgagctgc 3240
cagcccgagg ggtccagccg tgtcccagga ccagtaaggg cagcgggtac tcccgggagg 3300
ggtcccttcg gatcccgcgt ccccattacg agctgcccac cagccggcta gaaaggggct 3360
ggagctacgc agctgggggc cgtcatgccc cagcccacag ccctggagca ccggccgggg 3420
aggactcctc ctaaaggata agggggccct gatggagtgc ctgggctgcc cgcacagcgc 3480
ctgcgcacct tcaccgggga gcttccttgt actcctggga acgcctgtcc aggatgaggt 3540
ctccccaggg cgtctgggct tctggttggc ctcgctcact tcccccagtt cctgatccag 3600
ggagagcaac ggagagccct gccagaagaa ggcttggggc tgcgagtgcg gcccccatgg 3660
taccaatgca cagttgaccc agagcacagc aatcgcggcc aataggaggt gacttgggtt 3720
tagcctgtga ccacacagtc ctggtcaccc tgcacagact gccaataaag aggggtccga 3780
ggcccagctc cttggctccc ctgcagtgtc tccaaaaggg aagctgaggc tgtgggtgag 3840
tgggtgatgc cagtggtcca ggctccagtt ccaccttgca caaaggcctt cttaaccttt 3900
catcgaaaaa tatttctgca aggacatctg cccagcaacc acccgtccat cctcagactg 3960
gtgccacgca tatccttgat ccttgtagcc aaggataaat atctcaaaac aatcctgtga 4020
tcctcctcca ttttccttta aaaaccttg tcttccttca cctccctaaa ttcacacgtg 4080
ctttcctatg gcctgcttat tcccaagcaa tacctatttc caaagaaagt tcattttatt 4140
ttagagtctt tctgtatttg ttatgcagtg tcacatagcg gagccagaag tgggaccgaa 4200
gtgaattcat cttggatgaa tcagcgtgtc ctggaatcta acgcagtgtt gactgagccc 4260
cccgcagact gcctttccag gagttgcttt tctgttctgg tgaatctcct caaataccca 4320
gattccctcc ctttggtcag ttccttttta ctttatcctg gatgtgattt gattataagg 4380
ctcccttaaa caaaggacct tgcatccctc ctgagggtat aaaggttggg tttctttctt 4440
tctttctttc tttctttctt tctttctttc tttctttctt tctttctttc tttctttctt 4500
tctttttttt gcttctttgc ttttggcaag cactttctgg tgtaaagagc agtgcccttc 4560
tggtttgagg actctgagtt ctaaagaatt tatgttctgt ccatgaggca agtctttcct 4620

ggtgaattca cttttggttc tggatgcctg actgaatatt atgtttgatg tgtacacctt 4680
ggttgaaatt ttgtgagcat tctgatttgg gtttgatttt ggtttggttt cccacgtctt 4740
taaatgattt ggctcatttt tttttcttgc ttgttcctga acatcttctg atcatcccac 4800
agcaaaaata aacataaata gtttagcacc ataggaaatg ttaaaacaca cgtacacacg 4860
gtgagggtcg gcccctcgag gtggctcctg tctgtaatcc ctgcactctg ggaggccaag 4920
gtgagagaat ggcttgagct aaggagttgg agaccagcct gggcaacatg atgaaacccc 4980
acctctacaa ataacacaaa aattagctgg gtgtggcagc tcccacctgt agtcccagct 5040
atcaggaggc tgatgtggga ggattgcttg agcccaggag gtcgaggcta ccatgacttg 5100
tggtcctgcc actgcactaa agcctgttta acagtgagaa ttgtctcaaa aaatacacat 5160
atggtgagtg tgagaaagcc aactgaaaga acccagggtg tcaccaccat ctaaaacact 5220
ggtccagact cctgacagtc cctgacaggg tttataggat tttctttgct tctcagagat 5280
gaaaaagaaa tggaatggca ttctcagaca ctaaggcgtg ccagattttc tgggactcca 5340
ggcagctaca tggctttccc tgtgcacatt tcaaaatcaa tggccatcat tggaatcatt 5400
tgaactcctc aaatttgctt tttcctaata ctgaattttt aaactgccaa ctacaaagtt 5460
aaatggagag ccttctaagt tgtctacttc tgtctctctc ttttctgcct acttggaatc 5520
tgctgacatt tctgctggca ttaagataaa ctgataatat cacactccag ccaacataaa 5580
aaccactaag gaaggggtct tgaagggctt tcaaattaat ggctctataa attacaacag 5640
ctccgtggca aacaacaacc tagagacctt ttggaaatgt aaattcaggt ttgcctaaca 5700
gttgcttcgg gtgatggaac agtccacgga aggattgata ttagaaaaga acagaatgag 5760
agaaatgttt ataaatgtta ggcacccaga ttaaacaggt caaaatcatg agctcagagc 5820
aataatgaaa aggatctctg tttctggcat aaaaactgct tctctgctac acaggggcca 5880
ggaagagctg aacgaactgc taaaatgctt cccaccggca cggagctgtc aagcaactga 5940
gagtggcaaa cagaagagaa atttgttatt ggacttttca aaactgctag gagattttgt 6000
ttcttgtaca aaatccagcc agtcctagct aaaattaaac agttagtatt taatccctaa 6060
tctcatttga aactgaaaaa ggataaaggt gggctcaaag agattaaaat aaaaaccaga 6120
aaactaaact gcttgccagg cgcggtggct gatgcctgta accccagcac tttgggaggc 6180
caaggcacgt ggatcacttg gcatcaagag ttccagacca gcctgaccaa tatggtgaaa 6240
ccctgtctct actgaaaata caaaattagc caggtgtggt ggcgcacgcc tgtaatccca 6300
gctacttgag agactgaggc aggagaattg cttgaatctg gaggctgagg ttgcagtgag 6360
ccgagatcga gccattgcac tccagcctgg acaacaagag cgaaactcca tctcaaaaaa 6420
agaaaagaaa agaaaactgt tttacccaaa gttttggttg ctgccctcat aagattgctt 6480
atcaagacaa atgacaattt ttttttttct tttgagatgg agtttctctg ttgtcgccca 6540
ggctggaatg cagtggagtg atctcacctc actgcaactt ccgccttctg ggttcaagtg 6600
attctcctgc ctcggcctcc caagtagcta ggattacagg tgcacaccac cacacccggc 6660
tacttttttgt atttttagta gagacagggt ttcaacatca tgaccaggct tgtctccaac 6720
ttctgacctc aggtgatatg cccgcctcgg cctcccatag tgctgggatt ataggcatga 6780
gccacggggc ctggccctga aaatcttaaa gtttagcttt gggacctctc ccattttctc 6840
agaaatctca tttggatcca actgtgtttt ataaacctgt gagtccacat tacaatgttt 6900
tgctgtctca tgactacaat tctaaaatga aagctataag gtcttatttg tgtttctgtc 6960
tatgtatgta tgtttttgca tgtcgtatgt cgtgtctcca agttgaaatc tggcatggtc 7020
agctagacat cccttaagaa attctatttg gggtggctgg acatggtggc tcatgcctgt 7080
aattccagca ctttgggagg ctgaggcagg tggatcagct gaggtgagga gttcgagaca 7140
agcctgggcc acatggcaaa accccatttt tactaaaaaa aaaaaaaaaa aaattagctg 7200
gggctggtgg tgtgcacctg tattcctagc tacacaggag gctgaggcag gagaatcact 7260
tgaaccagcg ggggcagagg ctgcagtgag ctgagatcat gccactgcac tccagcctgg 7320
gtgacagagc gagactctgt cttaaaaaaa caaaaaaaga aaaaaaagat aaattaaact 7380
tgttaaaata tatagtgagc agggcatggt ggagcatgcc tgtattccca gctactcagg 7440
gggctgaggc aggaggatta cttgagacta ggagttcgag gccagcctga gcaacacagc 7500
aataccccat ctctaaaaaa aatatgtatg taggccgggt gcggtgtcaa acgtctttag 7560
tcccaccact ttgcgaggtc aaggtgggta gattgcttga gctcaggagt cccagaccag 7620
cctgatcaac atggcaaaac cccatctcta caaaaaaaaa aaaatacaaa aattagctgg 7680
gcttggtggc gtgtgcctgt agtcccagct agtggggagg ctgaggcagg agaatcactt 7740
taattcgaga aatagaggct gcagtgggct gtgattgcac cactgcgctc cagcctgggt 7800
gacagcgaga ccctatctca aatatatata taatatatat atataaaaca tatataatat 7860
atattacata tattatatat acacacacag atatatacac acacatatct atgtatgtat 7920
atgcatacat gtatacacac atacatatat aaatacatgt atacatatat aacataaaaa 7980
tgaacccaaa tacctttag ttcacatgat ctaactatat ctttgataaa taggctagtt 8040
ttaaatgtgt tgataaaata aaaataaaat atatttagca ccttcttttc tttctttctt 8100
tctttgtttc ttttttttt ttttaggcag agtcttgctc tgtcacccag gctggagtgc 8160
agtggtgcag tctcggctca ctgcaacctc cacctcctag gttcaaggaa ttttcatgcc 8220
tcagcctcct gaatagatgg tactacaggc acgcctcccc acccccggct aattgttttg 8280
tatttttaat agagaatggg ccttgccatg taggccaggc tggtctcgaa ctcctggcct 8340
taagcgatcc acccgcctcg gcctcccaga gtgctgggat tacaggcgtg agccaccgtg 8400

catgtccatc tttagcgttt gcagtgtaca ttttccactg ggtttgcggg tcagatggga 8460
tcatatgtgt ctctgctaga tgcctcaagg ttataaaacc ttaaacccaa cctaaaaaca 8520
aagtgatctt tgtttgtgga gttctttgat aaataaaact aatttagtat tgctacttta 8580
atgaaaatag ctctgtctta caagttactg gcaaaatatc tatttattta attttaagat 8640
tcttaggtga acatctgaga gtcacaggct acaaaagttg tgaacaggaa aaaaacctga 8700
aatgacgact agctttgtgt aatatctcag tattcaaaat taatggggat atagttgtta 8760
aaaatataaa ttaggtaact gtaaatggca taaatgtcta taaataagct tttcatagaa 8820
tttgagattt ttttgtttgc ttgcttgttg tttgtttttt ggcagattct ctcactgtgg 8880
cccaagatgg agtgcagtag tgcgatatcg gctcaccgca acctcagtgc gagtgattct 8940
cttgactcag cctgccaagt agctgggact acaggcatgt gccaccatgc acagctaatt 9000
ttagggtttc accatgttga ccaggctggt ctcgaactcc tggtctcaag aaatcctccc 9060
ctcttggcca cccaaagtgc tgggattaca ggtgtgagcc accgcgtcca gtcggaattt 9120
gaaatctttt tttttttga gatggagttt ctctcttgtt gcccaggctg gagtgcaatg 9180
gcatgatctt ggctcaccag aacctcggcc tcctgagttc aagggatttt cctgcctcag 9240
cctcccaagt tgggattaca ggcatgcacc accaagccca gataattttt gtatttttag 9300
tagagatggg gtttctccac cttggtcagg ctggtctcga actcccgacc tcagttgatc 9360
ggcccgcctc ggcctcctaa agtgttggaa ttacaggcaa gagccactac acccagccag 9420
aatatgaaat cttaaagtca ggttatgtta cattaagtga cagatactca ttaaatatag 9480
gggtcatttc caaataagac acaaaaacat aaattgccga acataaatat aagtgtgttt 9540
gtggcttctt aaaatctgat agaactacca aatatattgg ggttgtactg atacacataa 9600
aacagtgatg tttctaaaat tataaacggt tttcatctgt aaaatactga tatgtgacgg 9660
tcagttggcc aacatggcga aaccctgtct ctactaaaaa tacaaaaact agctgggtgt 9720
tgtggcgggt gcccataatc ccagctactg gggaagctga ggcaggagaa tcactagaac 9780
ccgagaggtg gagattgcag tgagctgaga gcatgccatt gcactccagc ctgggtgaca 9840
agagcaaaac tccatctcaa aaaaaaaaag aaaaaaatac ttttttcttt tgctagctgg 9900
tttttcacta gaaattaagg ttgctaagag ttaaaaattc taattaatct atacaattcc 9960
gtggaccaag tgtaccaaaa aaaagatgca tttttgacaa gaaaaattat ttaaaatgtg 10020
taaaagcatg tttttgcttt atttggtatt gttgtatatt taaaattatt tgaacttttt 10080
ataaattaag aaaaatagag ataggagtct gctatgctgc ccagcctggt ctcgaattcc 10140
taggttccag tgatccttct gccacagcct cccaaactgt tcagattgca ggtgtgggcc 10200
actgcacctg gccaaaatgt gttattcacg gaaataaagg aataattttg tctaatttgg 10260
agattatata atgttgtctc aaaatatgga tgtatgaact aaataaaaac aagacagaaa 10320
ggaaccagta agtaggagag agatgtgaag aatgttacag gtatgaagat atatttttgg 10380
taaaaacagt taaaaaaaaa aagaattcgg aatgacaaag gatcttgtgt ggtaaatttt 10440
ctgtcctaaa taaaacaact tattaattaa gaaaggggaa gtttaggtca aagcagaggt 10500
ctaagcatgt catggaattg ctaagtcatg aaaggtttgt gaaggatgaa tttgtgaaag 10560
aaatttttgt atgtgatcag gttggctaaa attagaagga aattatttat gagtctaagg 10620
attgagcttt catattaaaa ctacactgag gctgggcaca gtggctcatc cctgtaatcc 10680
caggactttg ggaggccaag gtgggtggat cacttgaagt caagagttgg agaccagcct 10740
ggccgacatg gtgaaacccc atctctacta aaaatacaaa agtttgccgg gcatgacggg 10800
acatgtctga aatcccagct gctctggagg ctgaggcagg agaatcgctt gaatttgaat 10860
ctgggaggca gaggtttcag tgacccaaga ttgtgccact gtactccagc ctgggcaaca 10920
gagtgagact ccatctcaaa aaaaaaaaac ctacactgat attgtcctct tatggctcta 10980
gaaggaaaaa aaaaaaaaag gagaagaaag aaagagaaag aaaaagaaaa aaaaaactac 11040
tctgattaaa aaaccaaaaa tttgcggccg cgtgtggtgg ttcatgccta taatcatagc 11100
attttgggag gctgaggcgg gcagatacct tgaggtcagg agttcgagac tagcctgctc 11160
aacatgggga agcctcgtct ccacgaaaaa tacaaaaatt agctgggtgt gttggcgggt 11220
ggctgtaatc ccagctagct gggaggctga ggcaggagaa ttgcttgaac gtgggaggcg 11280
gaagttgcag tgagcagaga tgacgccact gcactccagc ctgggtgaca gagtgagggt 11340
ctttctcaaa aaagaaaaaa aaaaaaaata cctaaaaatt tggtcccctg tgttagtaca 11400
acaaagtttt cttgaagtat agatcagctc ttagaaaatc taaaagagtt attaattttt 11460
acttctgaaa tatatttcac atctaaacta aagctttctt ttcttttctt tttttctgag 11520
acagggtctc gctctgtcat ccaggttaca gtgcagtggt gtggtcttgg ctcattgcca 11580
ccttgaccaa cagggctcaa gggattctcc tgcctctgcc tcctgagtag ttaggactac 11640
cacctactgt gctaactttt ttgtgtgtgc caccacaact ggcttttta tttttgtata 11700
gacaaggtct atgaaaattc catcattgca tcattggata aaactcttag aaatctaata 11760
tttcactggg gatttcactc cacgattaca ttgtatgtca cagaaataac caaacttcct 11820
tgtcaattac taattacaat aaactatcat cagatttttt ttttttaaat ataagtagag 11880
actctctttc tgtcacccag gctggagtgc agtggcacaa tcatagctca cggcagtctt 11940
gaattcctgg gttcaagtga tgcttccgcc tcagcctccc gattaactgg gactttaagt 12000
gcatgtaacc atgcctagct aatgttttta ttttttattt tattttatta tttttattta 12060
tttatttatt ttgagatgga gtctcgctct gtcgcccagg ctagagtgca gtggggcatc 12120
tcggctcact gccagctctg cctcccgggt tcacgccatt ctcctgcctc agtctcctga 12180

gtagctggga ctacaggcgc ccaccaccac gcatggctaa gtttttgtat ttttttagt 12240
agagacggga tttcaccgtg ttagccagga tggtctcagt ctcctgacct cctgatcctc 12300
cctcctcggc ctcccaaagt gctgggatta caggcgtgag ccaccgcacc cggccatgtt 12360
tttatttttt atgcagatga gatcttgcta tgttgcccag gctggtctgc atttcctggt 12420
ctgaagctgt cctcccaaag ttctttccaa agttctagga ttgcaggtgt gaacctccat 12480
gtcaggtctg aacttcaatc atatttttaa gaatggctat tcaaagtctc tgtcatccac 12540
agtgttgtcc ttccctaaaa acgtttccaa tcagattcat ggtaaagaca ttaccaagta 12600
ctcttaggac aagtttctga taactttaag atcaaaggac taggcttgct ccgtggctca 12660
cgcctgtaat cccaacactt tgggaggccg aggcgtgtgg atcacttgag gtcttgaggt 12720
ccggagttca agaccagcct ggccaacatg gtgaaacccc gtctctccaa aaaaaaaaaa 12780
aaaaaaaaaa aaaagactta gctgggcatg gtggcaggtg cctgtaacca cccagctatt 12840
caggaggctg aggcaggaga atcgcttgaa cctggaaggc agaggttgca gtgagccgag 12900
atcacgccac tgcactccag cctgggtgat acagcgagac tcagtctcac aaaaaaaaaa 12960
aaaaaaaatc aaaggactaa ataaaatttt tttcagaaca caagtgaaaa aacatgaatt 13020
tgtgaaacaa ctaatcaaga tcagacagaa caaaaattaa cgacatgaag ttaagtaacc 13080
agtgaaaatc tgtgctttaa acagaaagct taaacagtgc ttaaatcagt gtttaaaaca 13140
gagagctatg acctaaagaa taattacaga attgaacact gaagaaacca ccacccggat 13200
caagaaatgg actatgacca ggatctcccc accccacccc ataccttccc tgttcataat 13260
tcccattcct ttgtcaccaa aggaaactga gttgttgggt ttgtttgttg gtttttgttt 13320
gtttatttac agacagagtc ttgttctccc acccaggctg gagtgcggtg gcagcattgt 13380
aattcaccgc agcctcacac tctggctcaa gtgagcctcc caactcagcc tcgcaagtag 13440
ctgggagtac aggcatgtgc caccacacaa agctaatgtt taaatttttt ctagagatag 13500
aatctcccta tgttgatcag gctggttgca aacccctggg ctcaagcaat ctttcttacc 13560
ttggcctccc aaagtgctga gcttacaggt atgagtcact gcacctggtc tccctgaatt 13620
ttttgatact catttcctct tcatagtttt atccctcata tagtttagtt ttgcctaatt 13680
tcaactttat atacataaaa gatatgttgg atcctatgta ttcttttgtg atttgcatct 13740
tttgtccagc tttatgtctg tgagattcat ttaatctgtt gcatattaca actggttatt 13800
tccattgctg tatacgattc caatcatgaa acaattgact ttttatcttc tctcttttg 13860
tctttttgag acagagtctc cctctgtcgc ccaggctgga gtgcagtggc acgatctcga 13920
ctcactgcaa cctctgcctc tcaggttcaa gagattctcc tgcctcagcc tcctgagtag 13980
ctgggattac aggtgtgcac caccacacct agctaatttt tatattttta gtagtgatgg 14040
ggtttcacca tgttggtcag gctggtctcg aactcctgac ctcatgatct gcccgcctcg 14100
gcctcccaaa gtgctgggat tacaggcatg agccaccgtg ccctgcgaca ttttatcttt 14160
tctgttgtca atcaacattt ggggctgttt ccatgtctgg ctatttaaac aatgccactt 14220
tgtacacgtt tggtgctttc ctcctggaca tgtgccaagt ttctccagga cacctaccca 14280
ggacagaatt gctgtctcgt gggatgtgca cagctcaaca ttcagaacgc tgctcctatt 14340
ggttcctcca cttcctgcca gctccccagg gatggacttt taaatcttgg ccagtctggg 14400
atctgggaca ccaccccacc cagtgtggtc tcttctacat tggtagacac cttttcacac 14460
acgtttattg atatttcttc tttttctgtt tttctttttc ttcctgagac agggtatccc 14520
tatgtcacct gggctgcaat acagtggctc aaacatggct cactgcagcc tcaatctcct 14580
gggctcaagt gattctccca cctcaccctc cagaatagcc aagacgaaag gtgtgcacca 14640
ccacacctga gtaatttttt aatttttttgt aaagacaggg tctctccatg ttgcccagcc 14700
tggcctcaaa ggatcctcca gcctcatcct ccccaagtgc taggattaca ggcctgagtt 14760
aggaaaccag ggcgaattgt agcgaggatt gcttaaggtc atcataagaa gagcattgaa 14820
agaaacttcc cactacacag ctatcagaac ggctgaaata caaaatatga caacaccaga 14880
tgctggcaag tatgctgaaa aagtcactca gcttgctggt ggacacgtaa tggtacagcc 14940
aatctgcaaa acgagctggt aatttctcca aaaactacac atgcaaccaa catacagccc 15000
tggccattta tccaagacaa atgaaaacac atgttcactc aaaaacctac ccatgaatgc 15060
tcatagcagc tttatttata aaagccaaaa ctgaaagctg ctcaagcttc cttcagcagg 15120
tggttggtta aacacactgt ggtgcttcca tcccgtgaaa tagtgctcag cactacggag 15180
gagccagctg ctggcacacg cttggatgaa gctccaggaa gttatgttaa gtgaaaaaaa 15240
acgcccttcc caagagatca cacattgttt gtttgcattg atgtaactta gttgaaatga 15300
caaaatatta gagacacagg atgcatagca gattgccagg gattagggac aggggaagag 15360
gtggaggaaa gaggtgacct ggttataaaa gtgaccctgt ggggttggag ctcttcagta 15420
tctcaactat ggtgccgtta cacacaaacc tacttgggtg ataaaattgt atacacactc 15480
ccacacatat gcacacgagt acaggtaaca ctggggaaat ctgaataata actggggatt 15540
acgtcattga gggaaactaa gcaaagtgca caaggcattt gtccttcctt ccttccttcc 15600
ttccttcctt ccttccttcc ttctttcttt ctttccttct ttctttttttt ttattgagac 15660
agagccatgc tctgtagccc aggctggagt gcagtggcat gatatcggct cactgcaacc 15720
tctgcctccc gagttcaagt gattttcctg cttcagcctc ctgagtagcg gggaattaca 15780
ggcttgtgcc accacacccg cctaattttt gtatttttag tagagacagg gtttcaccat 15840
gttggtcagg ctggtctcag actcctgacc tcgcaatcca cccgcctcgt cccaatgtgc 15900
taggattaca ggtatgagcc accacgcttg gccaaggcca ttcttttatt atttttcttc 15960

ctttcttttt ccttttttg agatgttttc tcactcagtc acccaggttg gagcgcggtg 16020
gtgcaatctc ggttcactgc aacctctgca gcccaggctt aaaccaacct tccacctctg 16080
cctcaggagt agctggtacc acaggcacac gccacaatgc ctggctaatt ctttgtattt 16140
ttttatataa ttgggattct gccatattgc ccaggctggt cttgaactcc tgagctcagg 16200
tgatccaccc acctcggcct cccaaagtgc tgcggttaca ggcttgagcc accgtgcaca 16260
gcctgcttgt attatttctt actattacgt gtgaatctac agtttgtcaa aaattccaaa 16320
aggaaactcg ggccaggcag ggtggctcag gcctgtgatc tcagcacttt gggaggccga 16380
ggtgggcaga tcacgacatc gggagtttga gaccagcctg gccaacattg tgaaaccccg 16440
tttctactaa aaatacaaaa attagccagg catggtggtg cccgcctgta atcccagcta 16500
ctcaggaggc tgaggcagga gaatcatttg aacccaagag ccggaggttg cagtgagctg 16560
agatcatgcc actgcactcc cgcctgggca actgagcgag actcagtgtc aaaaaaacaa 16620
aaacaaaaac aaatacgaaa ctcggctggg tgcggtggcc attgtctgta atcccatcca 16680
tttgggaggc tgaggcgggc agatcacatg aggccaggag tttgagacca gcctggccag 16740
catggtaaaa ccccatctct actaaaaata caaaaattag ccgggcatgg tggcgggaac 16800
ctgtaatccc agctacttgg gaggctgagg cgggagactc acttggacct gggaggtgga 16860
gattgcagtg agccaagatt gtgccactgc actccagcct tggcaacaga gtgagactcc 16920
atctaaaaca aagtaaataa aaatttaaaa aatttaaaag aaattagccg ggcgtggtgg 16980
tgcacacctg taaccccacc tactcgggag gctgaggtgg gaaaatcatt tgaacctggg 17040
aggcagagtg tgcggaagat ggcgccactg cactccagcc agggcgagag agtgagacac 17100
cgtctcaaaa aaaaaaaaaa acaccgaaca aaatacaaaa caaaacaaaa ccaaacctca 17160
ggatggctgg gaaagctcct gactggcttt gcctttggag tgaatcaatc aatcaattaa 17220
gggcgtgcct gttagtgagt ctcctctgac ctttagccaa gaatgttccg aactcagcaa 17280
gatgaagcag gaggtagagg gaactaaggg ggcaacaagc aggagacagg aagggcccat 17340
gagggtgaca tcttccctga gaggtccagg acaaccagca ggaagtcagg cgggtgcagg 17400
caggaggacc caggaaagct cggcctgagg gaggccctag gtgtggtggg gagtggggta 17460
gggcaggcag aggctgggca gcaggtgagg tcccctggat tctgggggcc aagcctgggg 17520
cttgaggtaa acaggcctga gtggagaagg ggctgctgtg gttgggctgg ggtgggtgga 17580
gctggaggag ccttttcttc ttggaccaaa ttttgaattg tgctacataa catggtacat 17640
cagagttacc tccttcacca ttttcaagtg ttcagtacac acacattgtt gtgcagctga 17700
tttccagaac gttctcatcc tgcaaccctg aagttctgtc cctattaaac tccaactcta 17760
accctaaccc gaaccctacc ctaaccctaa tccattgccc cctcccccag tcccaggtaa 17820
cctccattcc acttctgtct ctatgaattt gactcctcta gggacctcag agaagtgtgt 17880
tcatatgcat ttgccctttt tgttattgtt tttaagaatc ttattttaca ggagacggta 17940
tttgtccttt tgtgactttc atatttcact aggtgtaatg tcctaaccgt ccattcacgt 18000
tgtaacagag tcttctccag ggcctccttc aaggctgcat gatatttcgt tgggtggatg 18060
accccatttg gtttcttcta ccttttgggt atatatatat atgcacatat ataacccagg 18120
ctggcctgga actcatgagc tcaaacaatt ctctgacttg gactcccaaa gactgggatt 18180
acaggtgtga accaccacgc ccagccatcc ttttggttat tctggttttc aaatttttc 18240
ccaattttat taagactgtg ataaaccagc caggcatggt ggctcatggc tgtaatccca 18300
gcactttggg aggccaaggc gggcagatgc cttgaggtca ggagttcaag accagcctgg 18360
tcaacatgat gaaaccctgt ctctattaaa aatacaaaaa attagctggg tgtggtggct 18420
tgcacctgta gtcccagcta cttgggaggc tgaggcagga gcatcacttg aacctgggag 18480
gcagaggttg cagtgagccg agatcacacc actgcactcc agcttgggtg acagagtgaa 18540
acactgaaaa aatgtctttc gaaaatgaaa aaaaaaaaat actgttataa acccttggat 18600
tgaaaaagtt tataatgata acttctacag tgtaaaaaat aaaaaagtaa aaagagttaa 18660
aaaataaaaa taaataaata aaattatcaa tgaaccctaa tcagaataaa tataaagttg 18720
aaaaacacac taaacaaatc actatattat tcaggaaaac atgcatatgt ggtaaaaagc 18780
aatcaacagc aaagtcaaga ttaaccaaaa tacaggatag tcattacctc tggggagaaa 18840
ggtgggagac tcaaaggctt taaatctttt tctcaaaaag atttatccct acagagtaaa 18900
taagggttta tttttgttat tcatctttaa atggaacaga tggaaaacat ttttttgcat 18960
gaccacaaca aatggaaaat atattaatga agttcagtca ctcttctgtt ttactcataa 19020
taacagaagc cagaaacctg ggagttacct ttgaccactc cctcaccaac caagtccaat 19080
taattttcac ttctaatcac acctataata ccagcacttc gagtggcgga ggcgggcaga 19140
tcacttgaga ccaggagttt gagaccagcc tggccttgat ggtgaaaccc catctctact 19200
aaaaatacaa aaattagccg ggcatagtgg ctcatgcctg taatcccagc tactcaagag 19260
gctcaggcag aactgcttga atcccggaag cggaagttgc tgtgagccgg gatcacacca 19320
ttgcactcca gccagggtaa cagaccaaga ctcagtctca aaaaaaaaaa aaaaaaagat 19380
cactttctat tcttccccac ccacaacacc aaaccctggc cccagccact ttgattctca 19440
ccaggaaccc aaatccctcc ctcttcctta acacccccgc tctaatccaa tctccacaca 19500
gcagccaaag ccaacacttt aaacatgatt aactctgtct gtcttcaact tgaatctccc 19560
tcactaccct ccttttctat cagaagcaac agagagacaa gtaaattgcc caaggccaca 19620
cagcaggaca tggcagagac aggattcaga atctactagt tttgacagtc cacatgtctc 19680
acccacccac tatcccattt tgggtgatcc cagaaaaggg tcagccactg ccctaacaca 19740

gggtaatctc agacaaggac agaggatttc tcctccaatc accacttccc ttcctttatc 19800
agcctaactc ccagttatcc ctaattctca gctcaaacca cacttcctct attttttttt 19860
ttttttttt tttgagacag agtcttgctc tgttggccaa gctggagtgc agtggcgcga 19920
tcttggctca ctgcaagctc cacctccggg ttcacaccat tctcctgcct cagcctcccg 19980
agtagctggg accacaggtg cctgccacca cgcccggcta atttttgta tttttagtag 20040
agacagggtt tcaccgtgtt agccaggatg gtctcgatct cctgaccttg tgatccaccc 20100
gcctcggcct cccaaagtgc tgggattaca ggcgtgaacc actgtgcccg gccttcaaac 20160
cacattttct aggaaaggcc ttcctaggcc ccttgtccta ttccagcaac tccccacaat 20220
ttgatggcca gcactttgta catctctaaa aacattcctc ttccactaga ttgtgccctc 20280
cacaagggca gaggtctgtt ttgcccacga ttgtggcaca tgtcacacac ccttgagcac 20340
tctggttcct ctccaaatcc atttctcctg aatgtgggcc cagattggtg gctcaagtct 20400
ggaaccctag cagtgttgaa ggatcgcctg agcccaggag tgcaagacca gcacgggtaa 20460
cagaaagaga tcctgactct acacaaattt ttgaaaatta gcttcacata atggaagata 20520
cacgggaggc tgatgtggga ggatcgcttg agcctaggag gtgtggcgtg aatgcaccac 20580
tgcactccaa cttgggtgac agagccagcc cctgtctcaa aaaaataaat aaataataat 20640
aataaaacag aaagaaaaaa atgatggcaa ggtatctgaa ctgcagaaat acttttaac 20700
tcagcctgag gctatcaaaa catctgatcc ccatgtgaaa ggctacagtt ctgggcatgc 20760
tcagggccca ccgaaaacag agtccgccca ggcaccctct gcctgtgcaa gggaacaggt 20820
gtcacaatca agtgcacaag ctgctctgga agacccagcc caggcctgtc tggccgaggg 20880
cactggactc tcccccactg cgtcgtccaa acattagtgc gagtgcaccc acacaaacac 20940
atacacaatc acacacaaca tgtaagcaat gggcaggact ggcccggccc cactcagtgt 21000
tgtcaccatt ggccccacag atgcccacag ccctggagct ctgggcctag attcctgcca 21060
gccccacctg tccaggccaa ggccagatgt tggagcaagg gggtgccaga gcggcaaagc 21120
cccccatgtg ccccctttccc accgggccca ggctcctggc atcagaaagc tgaacccagt 21180
atctggcccg ggctgtgtgc ttccagcctc ccctcctctc gacaccagaa cagagcctgg 21240
cccccagctc ccaggaaata cagaaaaaaa aaatggtgga tgaacgagtg acagggtgtc 21300
ttgttccaca caagacacag tgagcagggg ttgggggagg ggcccctggc ggcaggatgc 21360
acactgcact atacccaaaa tcccaccctt ccctgggggа cacctggtcc caccctaagc 21420
tgcctttctc aggaccccag ccccagccca gcccagccac accctgccac tcccttcagc 21480
cagtgtggct tcaggtcaag aggctgggcg gggtcaaggt ggtaacaagg ggaggggcca 21540
ggacacagtt ttccctgatt taaacccagg cagcctggag tgcagctcat actccatacc 21600
tgggatttcc gcctcgccgc tctccgactg cttccagaca tgcaggggcc ctgggtgctg 21660
ctcctgctgg gcctgaggct acagctctcc ctgggcatca tcccaggtaa tgaggctccc 21720
ccagctgccc ctacacacac acacacacac acacagggca ccccccagcc caggctgacc 21780
tgatctttgc tctccccctg gccagttgag gaggagaacc cggacttctg gaaccgccag 21840
gcagccgagg ccctgggtgc cgccaagaag ctgcagcctg cacagacagc cgccaagaac 21900
ctcatcatct tcctgggtga cggtgagtga gccaggcctt ccagccccgc agccctcaca 21960
gccccggcgc ccggaccctc agtggttcca ggacagccct ggggagcaag cctcacacac 22020
ttctgctcct tcagggatgg gggtgtctac ggtgacagct gccaggatcc taaaagggca 22080
gaagaaggac aaactggggc ctgagacctt cctggccatg gaccgcttcc cgtacgtggc 22140
tctgtccaag gtaagtgctg ggctacctta gagtcctcca agcacagaag gggaatcctg 22200
gctatggagt gtggtaggag ggagggaccc taaacagctg gggctccaat aaggagctgg 22260
aggcagttgg aatcccagag gacagagatc agggtcttgt ttgtctgccc cagagaagag 22320
ctcagagtgt ctctgtcccc agacatacag tgtagacaag catgtgccag acagtggagc 22380
cacagccacg gcctacctgt gcggggtcaa gggcaacttc cagaccattg gcttgagtgc 22440
agccgcccgc tttaaccagt gcaacacgac acgcggcaac gaggtcatct ccgtgatgaa 22500
tcgggccaag aaagcaggtg agctggggcc cgctgtgggg tcagggccag gtgacagacc 22560
tctatcgcat atcctgacct ctatcaccct caggaaagtc agtgggagtg gtaaccacca 22620
cacgggtgca gcatgcctcg ccagccggcg cctacgccca cacggtgaac cgcaactggt 22680
actcggatgc cgacgtgcct gcctcggccc gccaggaggg gtgccaggac atcgccacgc 22740
agctcatctc caacatggac attgatgtgc gacccccggg ccaagggctg gggctgggca 22800
gagagtagca gggagggggc accagctcag acccaggcaa ccaaaagcct tatctgggcc 22860
agcagggtct ggaggtgggg ttgggggcgt agaaggcgca gcccaggctg ggccattccc 22920
acagccttgg ggaggggagt caggggctgt gcatgaggag ggggcacggg gccagccagg 22980
cccccaaatc cacctgcccc atcctctgtt cccaggtgat cctaggtgga ggccgaaagt 23040
acatgtttcc catggggacc ccagaccctg agtacccaga tgactacagc caaggtggga 23100
ccaggctgga cgggaagaat ctggtgcagg aatggctggc gaagcgccag gtgatggggg 23160
ctggcgggtg caggggcac agcaggggga gggcagaggt gtggggctcg gggctgtggg 23220
ctgaggcctg gctctctccc tccccacagg gtgcccggta cgtgtggaac cgcactgagc 23280
tcatgcaggc ttccctggac ccgtctgtga cccatctcat gggtaatgat ccccttcctg 23340
ccctggcatc cctcagatgg cctcagatgg caccttctga gcctgtgtgc acatccgcca 23400
gcacccgccc acccccagcc tgccagtcac cacaggaccc cttgtcccac aggtctcttt 23460
gagcctggag acatgaaata cgagatccac cgagactcca cactggaccc ctccctgatg 23520

gagatgacag aggctgccct gcgcctgctg agcaggaacc cccgcggctt cttcctcttc 23580
gtggagggtg cgtggtggcc cctggggagt gggggttggg ggttggagca gggcaggctc 23640
agcatctccc ccctctggcc ttcctgcagg tggtcgcatc gaccatggtc atcatgaaag 23700
cagggcttac cgggcactga ctgagacgat catgttcgac gacgccattg agagggcggg 23760
ccagctcacc agcgaggagg acacgctgag cctcgtcact gccgaccact cccacgtctt 23820
ctccttcgga ggctaccccc tgcgagggag ctccatcttc ggtaggcctg gggagagtgg 23880
caggtgctgc tgcagcaatt aagtgggtga aatctgagcc tcagtctcct cctctgtcaa 23940
atgggagtaa tgctggcacc agccctgtag ggtctcctgc ggactaagcc cctgaccagg 24000
caaaacgtgg cggtgcctag cacgtgggag acactccaca gctgtgttca gctcaaccac 24060
agggacccct ctctctgcag ggctggcccc tggcaaggcc cgggacagga aggcctacac 24120
ggtcctccta tacggaaacg gtccaggcta tgtgctcaag gacggcgccc ggccggatgt 24180
taccgagagc gagagcggtg agtgccgcgg ggtggccccc tgaggggggac cagggtgcca 24240
aggatggggg gctggcggga aggggtcacc tcttgtctgc ctggaactga aacttcctac 24300
tgaaactgaa ccctccaacc agggagcccc gagtatcggc agcagtcagc agtgcccctg 24360
gacggagaga cccacgcagg cgaggacgtg gcggtgttcg cgcgcggccc gcaggcgcac 24420
ctggttcacg gcgtgcagga gcagaccttc atagcgcacg tcatggcctt cgccgcctgc 24480
ctggagccct acaccgcctg cgacctggcg ccccgcgccg gcaccaccga cgccgcgcac 24540
ccggggccgt ccgtggtccc cgcgttgctt cctctgctgg cagggacctt gctgctgctg 24600
gggacggcca ctgctccctg agtgtcccgt ccctggggct cctgcttccc catcccggag 24660
ttcccctgct ccccacctcc agtcgtcctg ccggacctcc acctggagct gtcacccccg 24720
gagtcgccac acagacgtcc tgccatggaa ccttcccctc ccggtgcacc ctggggaccg 24780
agcccttgac accacgccct ttgctttatc ttgctcttga aattttggcc ccaactccag 24840
ggactgggga tttgtgcctg gcagctgcct gcatttcagg aaaagaggag gctcagacca 24900
tccagccccc gcccatatcc tgaggtggat caggcaggct ctctccccgg ggacatgagg 24960
cacccatacc taggaccccc tgcgcctttt ttagcttcag tcatggcagc acctgaggga 25020
cacaaggact tgggtgcatc aggacgcctt ggagaagcgt ggcttcctgc caccctgcaa 25080
cccaccctcc cagccaagga ggctgctgtg gtggggatcc ccaggggggc tttgacacag 25140
tcctctgctg tccctccact gggctaattc tacacccctg tgcccctcct aggggcccat 25200
gagtcagaga ggcttgcccc aagtcacagc cactcagatg ttcgacgccc cctaaggtcc 25260
attccagcac ccacctgagt tccgaggagc acctgggaag ctctgggtgc aggatagcag 25320
tccagagtcc atggccccgc ctaggccatc tgggtgctgg gcatggattt ctcagcaagg 25380
aagactcatt accttccctc cctgggcctc cattcttctg ggaaacacaa agcaataata 25440
aaaggaagtg ttagacaatg taatgccagt actacttcct agcataaaaa tcatgactga 25500
atgtggacac agtggctgga ggggtggata acacaggcca ggaggggctg ctgaggagca 25560
gatgactgag caggagacct gaacagagtc ggggcttgag caaggtggca cagcagcaca 25620
aaggccctgg ggcagtgtca gcaggctgtc tgggaggcca ggggctggat cagagggtgg 25680
gtagatgggg taaagcttga ggggtcagga gggtggggga catgggggac cgtgaagtct 25740
aggtagaggg gtgtggtcgg aggtctttga ggagggctgt gacctgccct ggctgggaaa 25800
tgagcactct ggctgctgcc aggagaaggg tctggtcttt tggatagagg gtgggggtgg 25860
tggagggtag aggtgagagc tggggaagga gctgactcca ggtgtttctg acctccctcc 25920
gaaagcattc tggagcaccc atcccaatac agccatactt agtatcacac ttgccccaag 25980
agaacattga aaagaattaa atgaaggtga aatcaaccac attttccagg aaagtttaca 26040
ttattacaga tttatttgta catttacaat ggtacaagga gcactttgtc aacatggtga 26100
aattctgtct ctacaaaaaa tacaaaaatt agccaagctt ggttgcccat gtctgtggtc 26160
ccagctactc aggaggctga ggtgggagga ttgtctgggg cctgggaggg tggaggctgc 26220
agtgaggtgc gatcacgtca ctacacttca gcctgggtga cagagcaagg ccctgtctca 26280
agaagaaaac aaaacaaaaa gactttgtac tcactagaaa tactagaatg attgaatact 26340
tctttatgaa aattgaatta acattgtaag acgtctattt gccaggcatg gtggttcaat 26400
gcctgcaatc ccagcacttt gggaggaaaa gaggttagga ttgcttgagt tcaggagttg 26460
cagaccagcc tgggcaaatg gtgagacctc acctctacac gttttcgttt agtgttgagg 26520
cagagtctca ctctgtctcc caggctgaag tgcagtggca ggatctaggc tcactgcaaa 26580
ctccacctcc tggattcaag tgaatctccc gccccagcct cccatgtagc tgggattaca 26640
ggcgcctgcc accatgccag gcaaattttt gaatttttag tagagatggg gtttcactat 26700
gttggccagg ctggtctcaa tcctgacctt aaacgatccg ctcgccttgg cctcagaaag 26760
tgctgagatt acaggcatga gccaccatgc ctagccccag atttttaaaa aatttagcca 26820
ggccaggtgg cacgtgcctg tcatcccaac tacttgggag gctgaggcgg gaggatcacc 26880
tgagcccagg gtagttgagg ctgcagtgag ctgagatttt gccactgcac tctagtctga 26940
gtgacagacc aagaccctgt ctcaaaacaa aacaaaacaa aacaaaacat gtatttgaga 27000
acctgggttt caggacagtt ttttcaattc tgggtttcag tggctgtcac agaaatatgg 27060
gaggtgaaca gaagatagac tcaaatagct ggccttacta aattatcaca ctcattgtta 27120
aattccatcc atcaagtatg caaaggtttc tggtaaaatc cagctagtat atttctatct 27180
tcccagttgt cagtcagttc ctctttctaa ccaatgtgga ggtgctgcat gattatattt 27240
tacatgagtg ctcacaccca cggacttcta ttatttaaaa ctggacaaat tttaaaatag 27300

attgttctgc tattagatta ttctgttgtc taggtttttg ttttttgttt tatgtttttg 27360
ttttccatgt gtaggtataa gggcttatcg gtcagctatg ttattgacca caaaatcaag 27420
tgtcatgaaa atattttcaa acttctattc aaaaatatgc actttcctta gcatgagttt 27480
tcattgaaag ataattacct tctcattttg tcattgaaat gacatcttta cctgaaggac 27540
acacaggaag tatatttata ttttcaatct tttcatggta cgcctaaaat ggagagcttt 27600
tcagttcaaa gtcagcaaac tggattgtaa gaaggaggga gggagagtta ggaagaaaga 27660
gagggagaac tcaggacagg tgggttcagt actttgtcat tctgcgactc attctatgtg 27720
gccagaaagt ttccacccac tccccttacc aagtatctta aagtttctat ttatgtttaa 27780
gtttctatta tgcggctatc taaactttac aaaatcaacc ccactgcctt ctgcaacatc 27840
tcatgtacac gctgggcttc tttcctgcgc tgattagacg gggggtgagc caatgagtga 27900
ggggtaaggg tgaacctacc tctgcacact gatttgtatc cggaatgctt tttttgaaaa 27960
aacccttcct gagtagctat tccatctgtg gttgcatttc caccatttcc tcataacatt 28020
gtttttattt aaaaaggcat ttgctgttgg caatatatct tgtctgctat atctaccttt 28080
tagtgggaca tgaaaaaaaa tgaaagaagt ggtttgtgta tttccctatt ggaacagcac 28140
ctggcaaata ccttcagctg agccatgttg ggaacatctg tgctttcagc tcattgcaaa 28200
gcaaacctcc cacactgggt actttgctct aacacgagtt tcttccaatc ttcggcagtg 28260
ttttctccac atcttccgac ggtgtttgct gacaaagaag tctttcggtt tgtcgacaga 28320
tcatttactg ctcattgttt ctgccatttt tcctgcaaca gaaagaatta agtttctccc 28380
tggtggtagg tgtttttagt ctcatggtat catgcaagaa actttaaaag agctttccaa 28440
atatctgtca ttgcgtatgg aaatatcaag aagtactggg ttgaactgca cctaaattta 28500
aacattgatg ggaaaaaatt gcactctttc ttcagttccg gaagcttagt ttggccaggc 28560
acagtggctc acgcctgtaa tcccagcact ttggaaggca gaggcaggtg gatcacctga 28620
ggtcaggagt tcaagaccag cctggccaac atggtgaaac cttgtctcta ctaaaaaata 28680
caaaattagc caggcatggt gatgcatgcc tgtagtccca gctacttagg aggctgagga 28740
gggagaatca cttgaaccca ggaggcggag gttgcagtga gctaagatct tgccactgca 28800
ctcaagcctg ggcgacagag cgacgttctg tctcagaaaa aacaaaaagc ttagttttag 28860
acaccttgcc aaccatgagg atttcacact gctcataagt aattaagtaa tacctccagg 28920
aacaaggcac ccggggcaaa cttcagcagt aatcagagtg ggggaaattc aaagagtttt 28980
gtttgctgat tttttattat taggggtaac gtctggtcag gtccgtaccc cgggtgacgt 29040
gcgctctgac aggagtaata aggaattctc agctcccccc tctgctgtgg ttcatctgct 29100
ctggatttct gttgttagtt gcagattctt tacaggaatc ttgtgtgagc ctcttggccc 29160
ttttggagga ttaggtcggt taaaactaga tcatataagg ctgcgcgcag tggctcacgc 29220
ctgtaatccc agcactttgg gaggccgagg caggcagatc atgaggtcag gagatcaaga 29280
ccatcctggc taacacggtg aaacccccgt ctctactaaa aatacaaaaa aaaaaaaaaa 29340
attagccagg tatggtggtg ggcgcctgta gtcccagcta ctcgggagac tgaggcagga 29400
gaatgacatg aacccgggag gcggagcttg cagtgagccg agatcgcacc actgcactcc 29460
agcctgggtg aaagagtgag actccgtctc aaaaaaaaaa aaaaaaaaaa agaaaactag 29520
atcatataat ctgtcaatct acttaggcag acacactaat actccacaat ttgctgaaag 29580
cttgtgatct ggagggcgta ctgtgtcaac ccctggcctg aggcacccaa ttcccttcct 29640
ccggggcacc cgggaaccac atggggtggg tgcctgcatg aagggtgaag gcaccagcat 29700
tcagctcaat attaaacatg agctcttggg tcgctcactg cccagggctg tgctgaggca 29760
tgtgatgagc ccaacaaaca gtaagcactc aggagggcct gatgttcctt taaccaaacc 29820
ccaaggtcca ggttagtctt gaggtgcttg cagcctgggc aggccattca aattgagcaa 29880
ctccttgtga gcaggggcgt ctcactccct gcaaaattca gaccccagat ggcacaagtt 29940
cagtccccac cagattcgag gccccctgcc cattgagtgc ccgtgagccc ctacacagtt 30000
ccagtgattg gcacaggaag cctcatgatc ggggaagagg agtatgctcc ctgcagcctc 30060
tcaggactca agggggatcc cagctgtgcc ctcctgctgg gtgctgatgt tgcatctgat 30120
gatgccctgg tcccactggt tctaggaaca ggcctcccca ccgggttagc atctgcataa 30180
atggcctttg cccccatccc aaggggggtcc caagatgtct acagtgtgtg ggacttacta 30240
tgtgggactt gtaattgtac cctctgagct aaggtggccc caggacctac tgactccctc 30300
cgaccagagc ttcccccttt gctaccaggc cacacactgg accccaacac caagaagcag 30360
ctgaagttcc tcttgataga agcttgccac ctaggatgcc accgggcatg cattggccag 30420
agtatgttat gtcttgatca ctgaagtcag gtcatagagc ctggactgca ggacattctg 30480
tggttacact atagggaggg tgtggtcaag tgggagaccc acctatatat ggacccaata 30540
ggtatagata cacaccccaa acccatctgg ttcttgctgc gtagatagaa ggcaatgagc 30600
gcctgtcggg ggaacaacca cctctgtaga aaggtcacag agcccggact gcaggacatt 30660
cctggcagcc cagccacacc catctcctga caatgcatct tctgtgccac ctctgggctg 30720
ggccaccacc ttcccggcta ctgcctcatg accctcctct gacaccccag ctctgggcca 30780
ggcacccaca tggacttgtc catctcctgc ccagtcttct tgactgagag ctggatgctg 30840
aagcagatgc tgttcaatat gttcttgtaa taggtcttcc catggacctt aaactatgag 30900
gggcatgggc agcactcagc cgcagaccag ggcaaggctg cagatagcgc cacaaccggg 30960
ccatgcaggc cacctgccct cccaggtgcc attagcagag aggctgtggt caggttgggc 31020
aggcagggac acagtcccac ctcatactcc ttgtccacag acccagtttg aaaaggaagt 31080

ctgggtagcc gaccatcacc accatgtact gaagttgcgg gccggagggc tggtgaggtg 31140
gcacagggcc tcagggcaca gcatccttgc ccacccccctg cccaccaagg aaaggagcac 31200
taggccagcc taggagtggg cttcacggtg ggggaggcag gcctgctcaa ctccacgaag 31260
tcctctttgt ccctttttatt ctctttcact ggcatacagt aggtgctcag tcaatgtgca 31320
tgggaccaac agatggcact gggggcccct caccacggcc ccagtagctg ttctggtctc 31380
catgcagtcc agctcctcca ggcgctggcc caggatgtac ttggtgtctt ccaccagctg 31440
ccacacatgc agggtcaggg gtcagggagc aagggtcaac ccagcagcct ttcactctgg 31500
tccatcactc ctggcatgaa ggagtctttc agcaccactt cctaagccca gagctcggtg 31560
ctaggcgcca agaggacatg ttggaggtag ggatccagac ccttcccctc cgacaataag 31620
ctcacaggct agaagaggaa atggctgcag caaccaccat gggcatccct aaggagatgc 31680
ctcctgagca tggctgaaaa ggtgggcagg ggcctggcag ggagggccac ctaccgctga 31740
cagaccagga ggaggaggcc tgcggcatga tcatactgga gcctcagaat aggctgaggc 31800
ctaagcaggg cctggtcccc ctgcctgcag ggggacattt ggggctcccc atgcgaggac 31860
catggcctcg ggagggttca ccctcagttc agcaccatcc tccccaccct aaaccagggc 31920
ggcccacctt ggtagatgac aagtgttcat gtacaaagag ggcacgaagc gccatgccat 31980
agtggtggtt ggcctggccc aggctgaccc gggccagttc atgaagcttg ccgatgccct 32040
ccatatcaag tgccagctag tgcagcacct catggaatgg taagaacagg tgctcactca 32100
ggaccaccac cacgtcccac acgaggtagt tatgcaggac cctgggggcc agatgaagcc 32160
agtggggtgt ccagaaagac attcatatgg gccaccaagg gcaccacccc cgcctgtact 32220
acccagcctg cggctggacc cagcactcag atagtccctc aaagaagggg caggaggtca 32280
tcccaggtat gtggaggctg aaattggagt gtgctgagct caatgacaca gcaggacact 32340
ctcgctactg atgccagccc ctgaagctga tgggtcaggg cttctatcat ttcctgactt 32400
gccatgggga gacagcgtct gtccttgagg gtgactgtct gactcagagc tggcttgcaa 32460
aggcctctgt tcctccccat ggtggataga taccacgagg ctctcccaag ggtggcccag 32520
ggacagcaga gctgtagcca cactttctct ttccaaccat ccctaggtga ggaaactgca 32580
gctcaggaag ctcccagccc tgccgagggc ctcggaaagc agaggggaga gctaggatcg 32640
gatacccggg ctctgggtcc ttttttagtg ctgcctcctc tagtgtgact actggacaga 32700
agtaggggtg gaaattcatg gcacacccag ccagcaagtc caggggggcag gggaggggcc 32760
tgggccatac tcacatgggg gggggggtg atcttctgca gctgtcccac cgtcatcttt 32820
ctgtacatgg agctgacatc tcgctggaaa tcatcatact ctgacacagt gatctgggtg 32880
ggcgtagcaa tcagggctga gccagccttg ccccatggtc ccctgtcatc agctgccccc 32940
actacagcca cagggtctcc ttagccttct gctccacagc atcagcaccc aggaggctga 33000
gcactcgctc catgaacacc ctgtgtgctg ccagtatctg caccacggga aggggctcat 33060
ccagggacag ggacaggcct agcctaggga cacccatcct ggggccccag gccttccctg 33120
cctccccatc ccatgtccca gcaccttctc actctcctca tcctgagcga ggtacagagt 33180
cctctctagc agattgagcc catcctggtc aatctaggga gggagacagg ggccagaggt 33240
cagagatcca catgccagac tccccaaaca gatggaattt tcaccccaat gcccagagag 33300
cgaccagaca tccatgggta gagacccaga agcacgcaga ccccagcccc tctttccacc 33360
cagacgagat gaccaaagcc ccatccctga ctgtctcagc ttacccctga aagcctgcac 33420
tttccctacc tgtcgggggc acttgcgcag tgccgcactg acccttgggg ttcctggctt 33480
tggcgccagc cccagccctc acggagatgt cagcccagcc cgccggcgcg tccctccctc 33540
cctgccctca ctgccttcca gagggctggg aaattgcggc tcccgcggct cggctgaaca 33600
cttcagttaa cccagggaaa ttacttgcgc cttcctcccg cgctctgccg ccaagcgctc 33660
ccctcccctg ctttcccttt ctctcctctt gcgcaccctc ctcccacgcg cagggacccc 33720
tagtcagggc cacgccccgg gtctgcggcc gctggctggg cgctcgggaa tcgcactcag 33780
gcggatgacg tagcgcgagg agttcctgta atctaggctg atctagagag agaagagcgc 33840
ggcggcactg tacacgccct gcaccttgta cagcagctgg ttgaggtccc agctggttga 33900
ggtcccgcga cccccggacg ctccgccgcg ccgcccaggt cccagccccc gcagtcctcc 33960
atgacctcta gcatgggccg aggactcagt agctctatct cgcgcatgtc gaggcacgaa 34020
cggaaaaagg cgctcacctt gcactgggcc gcgccgccgg gcccatccct gggccgtgcc 34080
agcaggcgcc tcaggcgctc ctctttctgc tcgccgaagg ccgcgatggt gccataggtg 34140
agcttttcgt tgggggtggc atggcgcttc agtcagcagc cgcagacgaa aaagtagaag 34200
ttctggtacg aagtccatgc tggcgtccag gttggctgcc aggaggccgg cggcgcgcgc 34260
taaggccttg ccctcggggc agctctcggg acaggcgccg ccgcccgccg cgaccgggcc 34320
ctggtacttg agcgccagca tagccgccag gatggcgcag agatcagcgg cgaacaccag 34380
ccccgaccgc aggctcacct cacgcagggt tccagcgcgg cagcccaggt cctggtggcg 34440
ctgctccttg agagaagcct gggcggcaga aaggcccttg cacgatcccc gcgccacagc 34500
agcttaggta cttgacctcc tggaacgcgt cgtagtgcgc cgtcagcgaa taccgggctc 34560
catggcaccg aggccgccgc gatgcagccc tgggccacct gggctatggg atgcgcgcgg 34620
ccgctggcct cctagtgggc ctctgcatgg ccccgggggg ccaaagctgc gggaagagca 34680
gagtcaggct caggaggcgc agcagcccga cggggctccc aggcaccgcg aggagagacg 34740
caggcctggg tgcagaggcc ccagctgccg gcctcattca ctgcggaaac cagggacgag 34800
gagagtctgg cggggccacc atccccgcgt gcacagtgga gtcttctccc ctgtcctcct 34860

ccctgcacac acgtgtcgga tgctggattg ggaggcctct tatgggaagg gggaggcgct 34920
gggcacgggg cctggcacgt agggggcctt cattgcatct ctcttccctt cgcctttctt 34980
gtccacgacc tgtcctagcc aaggccaagt ggggtggggg aaggagcaga ggctggagtg 35040
aggaggtgcg gtcaggggcg cgtctatgcg gcactttcag ctctccgagc tggacacaga 35100
cagacgcttc gcaaaacggc caaagaacca aactttgtcc tcgtggaagt ctgcgggatc 35160
taccacttca aacccgctcg ctggctcctt ctgctcggtg gcccgacggc ccacccgccc 35220
cttcccaagg ggaacgcact attgctccag ggtcgcggat acacaaccca ccccctgcac 35280
ggcagtgatg gggaacccga gacctgtccg tctctatccc ctttccgctc cactcctggc 35340
ttcaacaggt tctccctaga acccacactt gcgcgaagtt tcacccacgc tggggcgcga 35400
gctggccggg cgagcccaga gccatgcagg cgcggcgcgc agtccatgga gcctcagagc 35460
cgagcctggg agtcgcagcc ggcggatgga cgcaaacaaa gccgggaggc tccgcgcagc 35520
ggctacgaag gtgacggaag tggccgcggc tgcagggact caggcgccac ctacccggca 35580
ggtgcgcgcc ggagcctggc agaggcggag cgggtcgggc cgaagccgct gcctgagcag 35640
gagcgaagcg gcgctagcgg ccggtgtctc cccgctcccg ctgccttctc tgccgccgcc 35700
ccagcccgcc gcccgcctgc ctgcctgccc gagggagagg acgcgccggt ggctccaccc 35760
tcctccgccc gtcccgcgct cccttccttc ctcctgcgac cctctggcta cctggcagcg 35820
cggcggcagc ggggacctgg gtcgggggcc gcggagacag gcttccgagg gtcgtgcgcg 35880
ggctgcggta ggggactccg gatccagtgg catcccggga ctagtgaggg tagcgggtac 35940
acccggcagg agtcccctcc gatcccgtgt ccccactcgg aaccgcccac caaccggttg 36000
gaaaggagct ggagctacgc agctgggggc cgtcatggtc cagcccacag ccctggagca 36060
ccacccaggg aggactcctc ctaaggattg agagggcgct gacggagtgc ctgggctgcc 36120
cgcacagcgc ctgcgcagag ctcaccttca ccagggagct tcctttacct cctcggaacc 36180
cctgtccggg atcagctctc cccggggtgt ctgggcttct ggttgtctcg ccccttcccc 36240
ccagcctctg atccacggag agcaacgcag agccctgcca gaagcaggcc tggggctgtg 36300
agtgtggccc ccatggtccc aataggcggt tgtcccagag aacagcaatc actgcctata 36360
ggaggtgacg tgggtttagc ctctgaccac acagtcctgg tcaccctgca cagactgtca 36420
ataaagaagg gtctgaggcc cagctccttg gctcctctgc agtttcccca aaagggaagc 36480
tgaggctgtg ggtgagtggg tgatgtccgc ggtccaggct ccagttccct cactgtgggg 36540
tcttccccta cccctgtgat atggtttggc tctgtattcc cacccaaatc tcacctcgaa 36600
ttgtaatccc cataatcccc acgtgtcaag ggcgagacca ggtggaggta attgaatcat 36660
ggggctggtt ccgcacgtgc tgttcttgcg cgaatgagtg agtctcgcca gatctgatgg 36720
ttttataagc gtctgacatt tcccgtttgc gcgcattctc tctcctgtcg ccatgcgaga 36780
aggtgctttc caccatgatt gtcagtttcc tgagggctcc ccagctatga ggaaatgtga 36840
gtcaattaaa cctcttttct ttataattta cccagtctca ggtatttctt cataggaggg 36900
tgagaacgga ctaatacacc ctgattgccc aggtgacccc atgactcata tgcaagagca 36960
tggcagacca cagcagtgcc cagcgacacc cagtgaagcc ctgagtgacg cagctggata 37020
cctgatgtga gggtgagcgg gtgggtagag tagccagagc tgccttggag agagaaggcc 37080
cgaggggtg ccgggcacag accaggcaca gaccgtgagg gcttcagaat ctgactcgct 37140
gcctaccccc tgactaacga cagatcccag tcatccagcc tatgcacctc gtcagaatca 37200
aaacagagtt ccttttgtta aaaatcctga gaagtaaagc caggaacatg aaggggattt 37260
atcatgcaca aaacctgata tcaagaacta tcacagaaga ctgcaaacaa ccagcttgca 37320
taatggcctt cacaaccttt caccaaaaaa tacttctgca aggacatctg cccagcacct 37380
gcctgtccat cctcaaactg gtgccactca tatccttgat ccttgtagcc aaggatgaat 37440
atctcaaaac aatcctgtga tcctcctcct tttttcttta aaaacctttg tcttccttca 37500
cctttctaaa ttcacacata gtttcctctg gcctgcttat tcccattgca gtacctattt 37560
ccaaagaaag ttcattttat tttagggtct tcctgtatct gttatgcaat gtcacatagt 37620
ggtatcagaa gtgggactga agtgaactca tcttggatga atcagtgtct cctggaatct 37680
aacactgcat tgactgagcc ctctgcagac tgcctttcca ggagttgctt ttctgttctt 37740
gtggggaaaa gaaagagaga tcagattgtt actgtgtctg cgtagaaaga agtagccata 37800
ggagactcca ttttgttctg tactaagaaa aattcttctg ccttgagatg ctgttaatct 37860
gtaaccctac ccccaaccct gtgctccctg aaacacgtgc tgtgtcaact cagggttaaa 37920
tggattaagg gctgtgcagg atgtgctttg ttaaacaaat gcttgaaggc agcatgcttg 37980
ttaagagtca tcaccactcc ctaatctcaa gccactccct aatctcaagt acccagagac 38040
acataactgc ggaagactgc agggaccact gcctaggaaa gccaggtatt gtccaaggtt 38100
tctccccatg tgatagtctg aaatatggcc tcatgggaag ggaaagacct gaccgtcccc 38160
cagcccgaca cctgtaaagg gtctgtgctg aggaggatta gtaaaagagg aaggaacgcc 38220
tctttgcagt tgaggtaaga ggaaggcttc tgtctcctgc ttgtccctgg gcgatggaat 38280
gtctcagtgt aaagccgatt gtatatccat ctactgagat aggggaaaac cgccttaggg 38340
ctgtaggtgg gacatgctgg cagcaatact gctccttaag gcattgagat gtttatgtat 38400
atgcacaaca aaagcacagc acttaattct ttaccttgtt tatgatgcag agacctttgt 38460
tcacgtgttt acctgctgac cttctctcca ctattatcct atgaccctgc cacatccccc 38520
tctccaagaa acacccaata atgatcaata aatactaagg gaactcagag gccggtggga 38580
tcctccatat gctgaacgcc ggttccctgg gccccctttt gtctttctct atactttgtg 38640

tctctttctt ttccaagtct ctcgttccac ctaacgagaa acacccacag gtgtggaggg 38700
gcaacccccc ccttcatgtt ctggtgaatc tcctcgaata ctcagactcc ctccctttag 38760
tcagttcctt tttactttat cctggatctg ttttggttat aagcctccct taaacaaagg 38820
accttgcatc cttcttggga gtatagaggt tggagttttg tttttggttg gggtgtgtgt 38880
gtgtgtgagg cagtcttgct cggtcaccca acagagtcct gctctgttgc ccaggctgga 38940
gtgcttggca ggatcacggc tcactgcaac ctcttcctcc caggttcaag cgattcttgt 39000
gcctcagcct ccctagtagc tgagactaca agcgtgcacc accatgtccg gctaattttt 39060
gtattctggt agagactgga ttgcaccacg ttggccaggc tgatcttgaa ctcttgacct 39120
caagtgatct gcccacctcg cctcccaaag tgatgggatt acatgggtga gccactgtgc 39180
ccagccagtt ttgtttttt atttgcttct ttgcttttag caagcacttt ctggtataaa 39240
cagaagtgcc cttctggttt gagggctctg gtttctacag aatttatttt ctgtctaggc 39300
ggcaagactt ttctggtgaa ttcacttttg tttctgcatg cctggctgaa tattttgttt 39360
gatgtgcaca ccttggttga aattttgtga gcactctgat tttggtttgg tttcccacgt 39420
ctgtaaatga tttggttcat tttttttcat gcttgtgaac atcttctgat catctgatag 39480
caaaaataaa cataaatgat ttggtaccat aggaaacatt taaaaataaa taaataaata 39540
aatgtcgagt gcaggcctgg cacaatggct cccgcctata atcccagcac tttggaaggc 39600
caaggtggga ggatggcttg agctcaggag ttcaagacca gcctgggcaa cattacaaaa 39660
ccctgtctct acaaaaaata caaagattag ccagtcatgt tggtccatgc ctgtaggccc 39720
agctactagg gaggccgagg taggggcat tgcttgagct caggaggctg aggcataaga 39780
attgcttgaa tctgagaggt ggaggtcata ttgagctgtg atcgcaccac tgcactccag 39840
cctggttgac agaatgagac cctgtctcaa caacgacaac aacaaaacaa tttaaaaaga 39900
tgggtatgag atagccaatt aaaagaaact agggcatcac tacctctaaa tacttgtgca 39960
aactccagga tttataggat tttctttgct ctcgagatta ataagaaagg gaatggcatt 40020
ctcaaacatt aacagccagc tacatggctt ttcctcatgt acattttaaa atcagtggca 40080
cgataggaat catttgaact ccccaagttt gtttttttcct tatactgaat tttaaaattg 40140
ccaactacag agttaaatgg agagccttct aagttctcta cttctctctc tctttttttct 40200
gcctacttga aatctgctga catttctgct ggtattaaga taaacccaca atatcacatt 40260
ccagccaaga taaaaaccaa taaggaagag gtcttaaaag gttttcaaat taatggttct 40320
acaaattaca acagctccat ggccaaccca caacctagac gccttttgga aatgtaaatt 40380
taggtttacc tgtctaacag ttgctttggg tgatggacca gtccatggaa ggactgctat 40440
tagaaagaat agaacgagag aaatgtttat aaaaattagg ctctcagatc aaagaggtca 40500
aaattgtgag ctcagagcaa taataaaaag gatttctgcc cagcataaaa attgctttgt 40560
ctgctacaca gggccagaag aacttaaaaa aaaaaaacct gctaaaatgc ttccctacct 40620
gcgtggaact gtcaagcaaa taagagtggc aaacaaaagc aattagttat ggacttcaaa 40680
actgcttggt gattttcttt ctctaataaa atccaggcag tcctagttaa aatataaaca 40740
tttaatattt aacccctaaa ctcatttgaa actgaaaaag ggaaaaggta cgatcgaaga 40800
aataaaaatt aaagacaaac aaaaaagaaa accaaactgc tttacccaaa attttggttc 40860
acagccctca taagattgct cataaagaca aatgcaaatc ttaaagttta gctttgagac 40920
ctctcccatt ttctcagaaa tctcatttgg atcctactgt gtcttataaa cctgtgagtc 40980
tgtattagta tgttttgctg tctcatgacc gaaacgctca aatgaaagcc ataaggtctt 41040
atttgtgtgt atctatgttt atgtatgttt ttgcatgttg tatgttatgt ctccaatttg 41100
aaatctggca caataggcca gaaattcctt aaggaattat attcagttta acttagatta 41160
attaaacttg ttaaaatata tagtgagcag ggcatggtgg agcatgcctg tattcccagc 41220
tactcagggg gctaaggcag aaggattact tgagcccagg agttcaagga cagcctgagt 41280
gacatagcaa gaccccatct ctaaaaaaaa tatgtatata ggctgggtgc ggtgtcaaac 41340
atctttagtc ccaccacttg gggaggctga ggtcggtgga ctgcttgagc ccagtagctg 41400
gagttcgaga taagcctggg caacatggca aaaccccatc tctataaaaa aaatacaaga 41460
attagccagg catggtggtg tgtgcctgta gtcccagcta ctagggaggc tgaggcagga 41520
gaatcacttt aacttggaaa gtagaagctt ccatgggctg tgattgtacc actgcactcc 41580
agcccgggtg acagagtgag accccatctc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 41640
tatatatata tatatatatg cacacacacc tgtgtagata catacatata taaatacatg 41700
tatacatatt acatatacat acatatataa catagtaatg aacccaaata ccttttagtt 41760
catgcgattt aactacatct ttgataaata agctggtttt aaatttgttg ataaaataaa 41820
aatagaaata tctttagcat tttcttttct ttcttcattt cttccctctc tcttcctccc 41880
tccctccctc ccttccttct ttttttttttt ttttttttttt ttttttttttt ttttttttttt 41940
ttttttttttt taaaaaaaaa aaaaaaaaaa aaaaaaaatt ttttttttttt ttttttttttt 42000
ttttttttttt ttttttttttt ttttctttttt ctctctcaga gcctctctct atcacccagg 42060
ctggagtgca gtggtgcaat ctcggctcac tgcaacctcc acctcccagg ttcaggtggt 42120
tctcatgcct caacctcctg agtagatggt actataggtg ctcatcacca ctcctagcta 42180
attttttttg tatttttagt aaagaatggg ttttgccatg ttggccaggc tggtctcaaa 42240
cttctggcct caagacaaaa aacattaaaa ttaaaattaa aattaaaatt aatttaatca 42300
aatgcctggc ctcaagtgat ccacccgcct cggcctccca gagtgctggg attacaggcg 42360
tgagccacca cgcacgtcca tctttagcat ttgcagtgta cattttcccc tcggtttgtg 42420

ggtcagttag gatcatacgt gtctctgcta gatgcttcaa ggtcctaaaa ctgtatttta 42480
ttttttattt tttgtgagac ggagtctcac tctgtcgccc aggctggagt gcagtggtgt 42540
aatctcagct cactgcaacc tccacctcca gggttcaagt gattttcctg cctcagcgtc 42600
ctgagtagct gggattacag acatgtgcca tcatgccctg ctaatttttg catttttatt 42660
agcgacgggg tttcaccatg ttagccaggc cggtctcgaa ctcctgacct caagtgatct 42720
gcccacctcg gcctcccaaa gtgctcagat tacaggcgtg agccactgcg cctggcctaa 42780
ggtcatagaa aaactttaaa cccaacctaa aaacagtgat ctttgtttgt gtagttcttt 42840
gataaataaa actaatttag tattgctggt ttaatgtaaa cagctctgtc ttaggagtta 42900
ctggcaaaat atccatgtat ttaactttaa gcttcttaag tgaacacctg agagtcacag 42960
gctatgaaaa tagtgaacaa gaaaataccc ggaaatgagt actagctttg tgtaatatct 43020
cagtattcat aattagtgga ggtataattg ttaaaaatat aaattaggta aatgtaaata 43080
ggatgaatgt ctataaatga gcttttcata gaatttgaaa tctttttttc ttttttttg 43140
agacagagtc tcctctgtcg cccaggctgg agtgcagtgg tgtgatctcg gctcactgca 43200
atctccacct cccgcgttca aatgattctc atgcctcagc ctcttgagta gctgggatta 43260
caggcatgcg ccaccacacg cagctacttt ttgtattatt ggtagagacg gggtttcacc 43320
atgttggcca ggctgctctc gaactcctgg tctcaagcag tcctccacct cagcctccca 43380
aagtgctggg attacaggca tgagccactg tgcctggcca gactttgaaa tcttaaagtc 43440
atgttatgct accttaactg acaaatactc attaaatata ttggtcattt ccaagtaaga 43500
gaaaacacaa aaacataaat tgctgaacac aaatatgttt gtttttggct tcttcttttt 43560
ttttttttte tgagaccaag tcttgctctg tcgcccaggc tggagtgcag tggcgcgatc 43620
ttggctcact gcaagctctg cctcccgggt tcgcgccatt ctcctgcctc agtctccgga 43680
gtagctggga ctacaggtgc ccgtcaccac acccggctaa ttttttgtat ttttagtaga 43740
aacagggttt caccatgtta gtcaggatgg tctcaatctc ctgacctcgt gatccacctg 43800
cctcggcctc ccaaagtgct gggattacag gcgtgagcca ccattggctt cttcagtttt 43860
atggaactac caaatttata ggggttaata cacataaaaa ttatgcgatg gggaaacatg 43920
tttctaaaat tataaatggt tcccatctgt aaaatactaa tatgtgacag tcatttaaac 43980
atttttgct tcctaggttt tcactacaaa ttaaggttgc taagaattaa aaattctaat 44040
taatttatac aattctgtag acaaagtgta cagaatatgt atgtttgatg agaaaaacta 44100
tttaaaatgt gtaaaaacat gtttttgttt tatttgagtt ttttgtatat ttaaaaatta 44160
ttttaacttt tttttaatta aaaaaaaaat agaaatagga tcctgctacg ctgcccagcc 44220
tggtctcgaa tttctaggct caagtggtca cctcccaaag tgttgagatt gcaggtgtga 44280
tccactccac ctggccaaaa tgtgttttca taaatccaaa atatggattt atgaaagaaa 44340
taaaaacagg atagaaagga acccgtaagt aggacagaaa tgtgaggaaa ggtatgaaga 44400
tatatttttg ataagtacag ttaaaagaaa aaagaataat ttggaatgag aaaggatctt 44460
gtaagttttt gtgtcctaaa gtaaaatgac ttgttagcta agaaagggga agtttaggtt 44520
aaagcagagg cctaagcatg tcatagaagt gctaagtcat gaaaggtgtg tgcggtgagc 44580
ccagatcgtg ccactgcact ccagcctggg caacagagag agactctgtc tcaaaaaaaa 44640
aaaaaaaaaa aaggaaatgc ttgaggtatt tctattttat caaccaattt aaaaccagct 44700
tatttatcag agatgtagtt aaatcacatg aactaaaagg tatttggttc attactatgt 44760
atatatgtat gtatatgtat aaaacagagc tgctttcaat aaaccagcaa tactcaacta 44820
gttttattta tcaaagaact acatgaacaa agattactgt ttttaggttg ggtttatagt 44880
tttatgacct tgaaacatct agcagagaca catataatgt cttcccattt ttttgggaag 44940
gatgaatttg ggaaaggaat ttttgtatgt gatcaagttg gctaaaatta gaaggaaatt 45000
attcacgagt ctttctaaag atggagcttt catattaaaa ctacactggt attctcatct 45060
gaaggctcta ggagaagtaa aaaacaaaca aaacaaacct acgctgattt aaaaactaaa 45120
aatttggtcc cctatgttag taccacaaga tatccttgaa atatagatct gcttttattt 45180
ttatttattt atttttgtaa tagagtcttg ctctgttgcc caggctggag tgcagtggcg 45240
caatctcagc tcactgcaaa ctctgcctcc cggttccagt gattctcctg cctcagcctc 45300
gggtagctgg gattacaggc acgtgccacc acacgcagct aatttttgtg tttttggtgg 45360
agatggggta tcaccatgtt ggccaggctg gtctcgaact cctgagctca ggtgatctgc 45420
ctgcctcagt ctcccacagt gctgggatta caggtaggag ccaccgcgcc cagtctaaat 45480
ctgcttttag taaatccaca agaagcatta atttttaatt ctgtgtttaa cagccatcta 45540
aactgaagct ttcatttttt ttttttttt tcctgagaca gggtcttggt ctgtcatcca 45600
ggcaagagtg gatccctcca aaattcagac actattcatg agtattctta tgacaacatg 45660
gttatttgaa gtttaagaat ttgctctctt tttatatagg atacaattgg aaacattggc 45720
tatattacca aagctttgat tgcaatatat ttgtgaatat gcatagaatg cctggcttct 45780
ggggttccca gccttacagt gagcaactaa aaattgtcac ttcctggcag gcccaggaaa 45840
cttcagactg cagaaaaaaa tctaaagtct gtcttggttt ggcttcctag cctcaagagg 45900
tttgataatc tgagattcct gttttgtttt gttttttttc agacaaggtc tgtaatccca 45960
aagtgctggg attacaggcg tgagccactg cgcccagcct tctgtggaat tcttaaaaat 46020
gggacccgcc tttgggaggc caaggtgggt ggatcacctg cggtcaggag atcgagacca 46080
gcctggctaa cacagtgaaa ccccgtctct actaaaaata caaaaaatta gccgggcgtg 46140
gtggcgggcg cttgtaatcc cagctactcg ggaggctgag aaaggagaat tgcttgaacc 46200

caggaggcag aggttgcagt gagccgagat cgtgccactg ccctccagcc tgggcaacaa 46260
agagtgaaac acggtctcaa aaaaaaataa aaggggaccc gctttgttcc taaagagagg 46320
aaccccacag gacagggcta ggagacagtg acatggacag ggactgcagg atcaaggctc 46380
atggagtgtt tggggccact gggacacctg ggaacagggc cccatggagg ccagtggaat 46440
cccagagcag ggagtgagtc ctctccccca acacctgctg agtgaccctg ctggagccct 46500
tcttgtctct gggcctcagt tttctcatct gtaacatggg aataataaca ggaccaacca 46560
acctcttagg gctgttgcag ggtttgtata aggccatgct gtgaaaatcc caagtggcag 46620
caagtctggc acagagcagg gcctcagccc ccgccccctg tgcatacaca caaacagatg 46680
catatacaca tgcacacaca catgcataca cacacgtgca tgcacacatg cacacagata 46740
tgcacacatg cacacagata tgcacacaca catgcatata catgtgtata cacacatgtg 46800
cacacccaaa acacacaggg ctcgctcctc aaggggacct cactgtgcct cagtttgccc 46860
atctgtaaag ggggtgatta tagcccctac tgcatgacgc tgctgtggag ctccgtgagt 46920
cagtacctgg aggatgccta ggactgggct gaacttagcc tgtacagccc cacagggagc 46980
tgagtggaga aggtgggctt gggtgttggg agcagagggg gcagcatggg aatccagggg 47040
ttcttaaagg tctaggtgcc tgtcacccat gaggaggccc caaggggtcc ctgaagaaca 47100
gaggcaccga tctcctcctg cccggtaagg gagcagggct gaggccagga acaggccagt 47160
gagagcctgc acaagccggg gagccttcag tgtgacagcc aaggaccagc agagcgccag 47220
cctgctaagg accccgggcc gcactcaggc ctgggcgagg gactgacctg gggacttctt 47280
gaggtttctc cgactgtatg gagctcacca gggaaaacat ggcggatgcc tggattcatt 47340
gcccagctcc gagctcagca caaaaactcc ctcttggaac agtctagaaa gaggctcacc 47400
tgaggcccag cacccagggg ccatgatgtc acgtgggcca aggcatctga ggggcagggg 47460
ccttccccat cccactgctg ccatggcccg tggcccacta tgccctgccc tcctgaccca 47520
ggagcccagt gcgtctctgt ggggtgggag gagcgtcagc aaaggagagg ctgcacaggg 47580
cgccttcagc agtgacggga aaccaagagc aggaaaagca accctgctca gccctgggcg 47640
actcagacag gaaagggcct gagcccgagg caaccaggag gcggcagcct tatcagggag 47700
gccgtgctgc gggcctgagt gctgcttctg ccctcatcca actgcagcgg gacagaggca 47760
gaggcaaagt gggggcctgg aagcaaggct tctaaggtgg caacagtgtc ccagcccagc 47820
caggcggtgg ctgcaggggc ccatgcgtgt gcgcctgtgc ctgtgaccag cctcagggcc 47880
taggggcagg gagcagacca ggggaaaggc tctgtccctg gggggtggcc gggcaggtgg 47940
agagccaggt tcagatgggt gaccctgggc tctgcagctg ctgtgatcct ggcagagggg 48000
aggaggcgcc ctcggcagtc aggagcagga tgatggtagt gacaaggccc tgctgtggac 48060
tgagcctccc agcctaggaa acctggctct ggcctcccct gcagcatgtg atgtttggct 48120
ccagaggcct tctcctctgg gcttttccat gcctgtgaac tgggccccat tcatttccct 48180
gtggtttcat ggaaacgtcc agtgcattca ggaggttgca gtgtgcccag gaggagaggg 48240
gtcagcgaga ggcccgagct gtgactggtg ggccacccag aggccacggc accctctgct 48300
ggagactggc agcagggtgc atggccagct gtgggtgggg gtccatcagt caagcagctg 48360
cactttctcc ccatcccccc ccccgaccca ggcaaggtgc tctgcctgcg gctccctttc 48420
tccaggcctc cactttccag ctcccaggct cccagcccca cccggcctgg cctggaacag 48480
ggctgccacc aagatctctt ccactttccc tccccagcag cctgcaattc agtgctccgt 48540
agacccctgc ctcccggggc cctgcggttc ccaccacact acactcaatt tccagctgct 48600
aagaacacag caggttctac gtaaaggtgg ccgtcacctg caccccatgg gctgcccggc 48660
catggagaac gggccatggt tgggtacaca gcttctgaga caggcccagc agctgccttc 48720
atggcctcgg cagagcccag ggctctggag cttacaggga gcatgtgccc aagtgtggaa 48780
aatttggtct gcagaagaaa tgaggctgaa attggctggg agcaattctt atcaaagcca 48840
cgttagcagt tttcagcaag agctaattga acaagctctg tgagtggcct cattccatta 48900
gcaggagcct cccacagagc gtgacaaggg ccctggtggc tgagggcaga aaaggctgtt 48960
tctgtcccac atttgccttt ggcctttgaa aatggacaca ttttcagctt tgggcactgg 49020
tcctgctcct ctgccccggc tcccgctcat ttccaaagcc actctctgag tgtcctgtgt 49080
ggggaagggg tgaggtgagt ttctcagcac ttcagcaggt gcgtggatct gaaacaggac 49140
agccttggag acacgtcctc cttgccaggc agggttgaga ggccaagtgc agaggagctg 49200
agagtctgag ggccaggcct gagcagtcta ggtcaggaga ttgggccctg ccttagcaac 49260
gtgcctgggc ctgaggagag acccactgcc ggcccagtct ccctcgactc ctctggagcc 49320
atggagtcct cagggagggg acaggaggca gctggggtgt ggccaggcca gagctgagct 49380
gatggaacct gaaccccact ttgtggggtg gccatgctct ctgctttctc ctctctgctg 49440
tgcccagtag actggaaaag atagatccag gggtgcagtc ctctgacctg agctccaggg 49500
tcacctgtct ggcctccagc ctgtttcctc catgctaggg ctgtcagggc aagtgtctga 49560
cctgggcccg cagggcgctg gtcaaggggc ccagggaggt ggggtccagc cctctgtgcc 49620
cctgactgac tgtctgatct gggcaaggtc cttcatctct tggccactgt cacatggcat 49680
gggcgacact cctcagtgcc tccaggatgc tgtaaggaag cggcatctga ctgcacccac 49740
cctttctgca gggaccatgg tcaggacaga gctgtggaca ctgagcaggg gctggcctca 49800
gggcccaccc agacaggcct cctcatctcc cccaacacca cagcggtact ccgtcctggg 49860
agctggccag ttgccctccc caggacagga cctcaggctt ccaccctgag ctccttcctc 49920
ctgccctggg ccctgcgggc tgtcccataa gctggctgct ctcctggggt ctttccctct 49980

gtgagctcct ctgcagata 49999

<210> 19
<211> 49999
<212> DNA
<213> Homo sapiens

<400> 19
cattccggcc tttgggatgc ttcagacagc aagcaggaag cagacagaca ccccgcatct 60
cccccaggcc aactccggcc gcatcagcag caacctggtg gggaactgtc cacacctgcc 120
agtctccctc cctccgtcct cttgggtttc tgaaccagcc tctccagccg cactgccact 180
gcgacttact ccttctggcc aaatccaagg gccctgtgca agcccctgct cttcttggca 240
gctctcacac tggggacaac ccgcaggctc ctctgaagtc ccagagctgc ttctcggcca 300
cttcctactg cctctgcctg ggagcttatc agctcctgcc ccgctgtgcc cagttgggaa 360
gagggcgccc ttgtggcccc cagtctccag ccttgctctt tcttttcttt tttgagatga 420
agtatcactc tgccacccag gctggactgc agtggcacaa tcctggctca ctgcaagctc 480
tggcttccag gttcaagtga ttctcttacc tcagcctccc gagtagctgg gattacaggc 540
acccgccacc atgcctagct aatttttgta tttttagtag agacggggtt tcaccatgtt 600
ggccaggctg gtctcgaact cctgacctca ggtggtctgc ccgccttggc ctcccaagtg 660
ctgggattac cctgctcttt tttgcttcct ggggctgctt cttgggagcc ttgggctgct 720
cagctttcat cccagccatg ccctgcctct ggtccagcct ccgtccctca ctgtgtcctg 780
cttaaggtcc ccgtgcaaag tccttccctt gttccaacag ccttccccag ctcccagaaa 840
aggtgccggt tgtagagtgt gacaggcacc aggctgtccc tgtgcccctc ctggcgcagc 900
ccttcagtct ccccttgaca cagtctgccc ttgacttctt attttccaaa ctaacctgat 960
gcttttcttt atttgtttgt ttttttgaga gggagtttcg ctcttgttgc ccaggctgga 1020
gtgtgatggt gcaatctcgg ctcaccgcag cctccacctc ccgggttcaa gcaattctct 1080
cgcctcagcc tcccaactag ctgggattat aggcgcccac caccatgccc agctaatttt 1140
tgtattttta gtagagacgg gagtttcacc atgttggcca ggctggtctc gatactcctg 1200
acctcaggtg acccacccac ctgggcctcc caaagtgctg ggattatagg tgtgagccac 1260
tgtgcccagc ctgttttgtt tgtttgtttt tgttttgttt tgcctccgtg actttgctat 1320
ctcacccctt tcctataaaa cagtcctttc tcaccatctc ttggaattag tctggcactc 1380
aggaatgcac ctctgctgtt gaggctccag gaagttaggg ccaaggccct ctggtgcagc 1440
agtgcagacc gcggcctggg ggtggggaga ctgtgtgtgg ccagtctttt atttttatt 1500
tatttttta ttttttacac cttaggcttt gacccacaca gaaagagatg gaacagcctg 1560
ggctgcaggg gcctggaaag ggacgagcat gtgggtggca ccacgcgggg cagctgcagg 1620
ggcaggggct gcctgttctc cttctcccgg tgctgctcca agggcacagt ttggtgaccg 1680
cagccactta ggggagcctt gaggatgcaa aagagagtga ggacacaagg acactagcaa 1740
agcctagctc tgaaggagga gggatgccat gctgggatgt cgccaccgtc ttgtctgagc 1800
ccaagggtgg tgctcggtcc acccgtgggg agcagggagg agagaggaca gggccctggc 1860
tgcctctggc ctgcttggga atgagctccc tcaggcggag cttgacagta tccacacgcc 1920
cagcagcaag catcatcatc agaaacacgc agcccagagc tgtgtgccca gcagaacagg 1980
gcactgggac agggacccag ccttctcagc tcctgaattg gagcctggca tgccccatct 2040
tagagtcctt cattctgtgc agatgcactt ggcatctaga gtgggaccgg agtccacgac 2100
acggcatgga aggaaatggc ccctgtgatc aaagaggctg tcacagacat ggcggctgag 2160
tgctgggatg ggctctgaat gggatgtcaa gaagcaggtg gcaggagatg ggtggaggga 2220
gggcaaagga cgatgatgct cactgctggg cgtgtggaag gggaggggag ctggacgcag 2280
aacctcattc cctggaggta ggactgagcc catgacgggg gagccgcaga gggcccttcc 2340
agcagaggga tgggaccagc tttggcgtga aggccgcaga gcagagcatg actagggagg 2400
ccacctggta aaagagacgg aggctgggac aagactggtg cccttgtcag agggaggcca 2460
ggagaagctt ctagaaatgt agctgcgtgt ttagcccaat tcctagagtt ggggcaacca 2520
tgccagtcac aacataggac gtgttacaat gatgtcttat tttttttca aggccaggca 2580
ctggcacatt gcttccctat tttacaggct ttgaaagaaa tggagattct gaaagcttaa 2640
ctaatttatc tggcaaggca tggtctctca tgcctgtaat cccagcactt tgggaggcag 2700
aggcaggagg atcgcttcag cccaatagtt ggagaccagc ctgggcaaca tagtgagacc 2760
tcctctctat agacaaaatt agctgggcaa ggtggtgcgc gcctgtggtc ccagctactt 2820
ggatgctgag atgggaagat caggatcact tgggccacca gggaggtgga ggctacagtg 2880
acccgaggtc atgccactgc actccaacct gggcaacaga gcaagacctt gtctcaaaat 2940
taaaaaaaaa aaaagtttga aatcacgcag cgagagtggc agggctggcg ttccagcatc 3000
gtcctttaag atgtgacagc aacaggtccc acttgagaca gcaggaacgc ggcacccagt 3060
gctgcctctg cacaggcccg atgcttgctg gaaccttaaa ggcaaaggag acccgatcat 3120
aaacgcatga agagcgcatg tttcatggga ttgatgttga tgctggtgtt ccatgcgagc 3180
cactgaggag aagcccctct ctcaatggca gggccatgag aggtgaagga cgcccctcca 3240

```
cccctccccc agacaggtct ttcctggcca cagatgcccc agatccctga atgtcaaaat 3300
caagtcccaa tctcccagtt gagcagagaa acattcagat ctggttcctc cgtgatcagg 3360
gaaggcaggc ttcctctgaa gcgcagatgg cttcacccct ttctcatctc atcacctcta 3420
agccctgcca gggcgagagc agcctttccc agcatcgtcc tttaagatgc aacagaaaca 3480
ggtcccacct gagccagcag gaatgcggca cccagtggct ggctctgcag tcttgatgct 3540
cgccggcacc ttcagggtga aggacgccct gtcgtaaacg catgaagagc cctgcgtttc 3600
atatattgat gttgttgctt tttctttaga ggaacgtttg tgcactgtgg gaacctctgt 3660
ctctaccagt gtcacccttg ctgtggggag tgtgtaccgt gtgcgggggg ctggtggcct 3720
ttctctgctg tctgccacag cgtgtgaggg gctcgctgag cctcacacct gccctatcct 3780
tccccatccc ctcctgcccc ggggaggcac agacccaggg aggaggggtg ctgggagtga 3840
gtgctgagga gctggggtcc tggccctgca gccactgtca caccacagcc ccaccccaga 3900
cctccagagt cgtgggactc tggtggcaca agctccagaa gcttggtcga tgccaggtct 3960
gggaccgagg cccccgtctc cgaggccttg gcttgctgtt ctggaaggtg atgctggctg 4020
gcagccattc ccagcccctc ggagagcagt tgtcaggcag tccctgagct ccagcgcccc 4080
attcccagca gggcccagtg atctcatgcc tgtgcccctg gtgctgggag gagcgggttg 4140
gcactagggc cggtgtccac atcagaggag gaaggtctga agccagggca gggggcaggg 4200
caccctcccg tccagcggcc ccagtgccca ctccattcct tcggggctcc cgtggcccag 4260
agtgtggagc ggcgcggcct gaccacccag gatagcttgg ggcgtttcgg aggtttggct 4320
gcctaggctg tgcacctagc actgctcccc aggagaggga gggaggaggt cagagtagag 4380
ggccctgctg accaggtcac tgtcacagcc tccatctctg gccctgggtt cccataggag 4440
cgcctaggct ctaagctgga gctgccccat cccaggacct tggggaggaa gaggctgggc 4500
gccacctgcc ggcccaccag ggaattgaca gggtgggggа ctgtggagcc tgtgctggcc 4560
gcagatgaga gccctgaccc ccaccttccc taccccaccc accctgcacc gtccagctca 4620
gttctctgac ccgtggtgcc aggtcccatt tgcaatggcg aatactgaac tcggtgcaac 4680
cctggctgct ggcagctggg cttggcctgc accttcctgt ccccagactc cactggggac 4740
ctcccttcca gccatcccag ggcgtcacca ccacagccag gggccagccc caccttcatt 4800
cactcttgct catagcctac ctgttcactc tgcccccatc tgctacctgc agcatcagaa 4860
ggacatgagg gcaccagaca gcccctgcag ctgtcctcaa acatcatggc caaggctgcg 4920
cctgggaagc ggactctctg cagtgccagc tccctcctca gtgcccttga cctttatctg 4980
ggtccctgct tgatgtggcc caactggctg ggccagagcc ccacaggcgc tgtcccgacc 5040
cccagccccc tagagggagg gagaggctga gacggcaagg gaagcagaga ctcagccaca 5100
ccaagggccc tggcaaggtg ggcctctcct ccaaagcctc accaggcttc acgttcaagg 5160
tcaccaagag tgcacttgtt cactgtcgag ggcagaggtg actcctggga ctgtgctggg 5220
ggtccaggga gagcaggtag cggagttgcc agggaagcag cttgcctgag gtctgtggtc 5280
ttggcagggg cttccgcagc ggccccaccc tctccctttc ccctccctcc tgtccttgtc 5340
ctcgtgttta ctgaagatca tgagaaggga tgtggagagc gcctgcagga actgagagca 5400
ggagcctggc tcaccccaa aggcccccag acattcagtt cctaaaccca tagggtgggg 5460
catgggcaca gaggagaaac cggggccgcc cggcacagcc ctgctctttc accctgcccg 5520
cctggtggcc tccttagcct gcagcctcgg agcgacccag tatggggaca tgctgccacc 5580
tgctggccac acttcaaaat gcaacccagg gtcggcctgg aggctacagg tgtccctctt 5640
cccccaggcc tgcaactggg ctggggaagg ggcaccaggg aacagcccag gtgctcctgc 5700
ccaggaggat tgtccgactg cgtggggaga aagtccagaa ccgtgcttgg cacatggtaa 5760
tctttgtgga atgagtgaac aaatgaatga atgaactatg catctgatgc ttttcggtga 5820
tgatgaccca accaagatag attacatgag ccattttcca gcaggaactg ggactcctct 5880
tgggctgaca agatgtaagt atgaaatcta aataagattc caatggcact agacagtgac 5940
acacgtgacc ctagctataa atgcccatgg aagagaattc tgtctgacat tcagggaaga 6000
cttggagcgg ggcaagggga tgggattgat ggcagaagtg agactcacag gacacgtgtg 6060
ggagacccct ggctggccat gttgggggag gaggggcaac aggaaagcag cgcctggatc 6120
tcgagggact tggctggctc agtccttcca tcgggagcca catttattca cagcgactgt 6180
tgagtctaac aacgctcaag tacagcaaag ctggagcaac aggccctgaa agggtgactc 6240
cagggtctca ccccaccctg actccttccc tcctgctgcc tcagactctc ctgtctaccc 6300
tcagagaccc tgtcgggagg cttccctcca acaaggcacc atccccaggg agaagggagc 6360
ccagcactcc tggccctgtg gggtcctcag tccactcacc actgccacat gccccaggga 6420
gtcctcggac taggacctgg gccgggcccc cctgggttcc tatggcctgg gcgagcatgg 6480
tgccctctta cagcctgggc tgcccgagcg ttccaggcat cctgtcattc agcagagatc 6540
tttcctcggt gccttctctg gattgggtgg gctgctgagc tctggggctg ctgccgtgaa 6600
ttatttaata gatgggtgct tccctgctct ccagggtccc cctctgggag agccagcaca 6660
ggagctaacc agtcagagga gaaggcggtg tagaccagct ggtgcagggg agaccatggg 6720
ggtgctgggc aagacaggga cttggcggaa cacatgagat gaggcagggc tgagccccac 6780
aggcaactcc tccccccaga gccgggcatg aggtgctcag cggatgacca ccagctcccc 6840
gagctggacc acatgtcaca caggtttctg ggatttgctt ctagaaaagc ctgacccaaa 6900
catttggaga tgacaagtac tcactggcct ggaaggaggt gctcaccaac atgtgcttcc 6960
ggcccatgca ggtaaggagg gcccagccca gtccccatgc aggtaaggag ggcccagccc 7020
```

cagtctcccc cgctcccggg agcacactgg ccccagaccg gtgacctcta cgtgcaagca 7080
caggccccca ccgttcctgc ctgctctgga catggctggg tggacggggg ctgctccacc 7140
tctgccagag ggtgggagag gaggccgacc ccaggcagca cctaggaggg ggcaccctga 7200
gcctcttgag tttgagccgc tgtctcctgc ttacacttac ttaaggacag agtgccctgg 7260
agctgagggg ctactgagac ctcctgtcag gctggggtcc tggaggagag acagggtccc 7320
atgtggcttc ctgtcccagg gaacactccg cagcctccat ccccacgtgg agtccagaac 7380
cagctgtcag cctctggcca gtgtgggaaa gaagcagact tggccggggg cctaggcctg 7440
ggcctgcagg gaggtggcag cctgtggggt ggacagctgg gcttgctctg ggatgcctgt 7500
cacagcgccc caggctgagc ttcccccgtg cagggcccga gcatcctggg accaggaccc 7560
cagaggaccc tcgggtcagc gggagcagtg gttgctgatg ggtcggctct gggtcccggc 7620
ccggcccagg gccagggaca ggctatattt taggggctcg gtcactcggc agattcaatc 7680
tgttcacaag aactggatgg cttcagctga cctcagtgga tttatttttct gacacttcaa 7740
gctctgctgg gtttgaagcc atcagggcct gcttgggcct ggtcaccgtg acctgccccc 7800
agtcacaagt gtctgcccag ccaagcacct gtggcaccca cagcggagag gggctgggcc 7860
gtgcctactg ggctctctct gttctacact gcagcggctc taggcctggc agagaaggcg 7920
cagcagcccc tgagtcccag aactgcctct ggctctgccc tgctggggcc cctcccatgt 7980
ccctgcctct gacgccatca cctccaagga ggtacaagcc aagctggagc tccagagatc 8040
agagccgctc cagagttagc cagagcccga aaaggctgca ttctcctggc tcgcctccca 8100
gggagctcag aggcgccctt gcccgggaat ccgatggcag agagttacca ggtctgcggt 8160
gctcctgttc ctcagcccgg ggaactgggg tggggacagg acagagcagc agcagagagc 8220
acagaaaggt gtgaggggca cacagtcccc agtaacatct gcatcaggac accagggctg 8280
tcccagggct gtcccaggga tggctgggcc tgtgggaaag ccatggtccc cacccatccc 8340
acccgaccct gagccacctc caccagccaa gaggggccag ggcccttcat caacctcacc 8400
caggtcatct ggggaactgg gccaccactg agaacaaagc ccagacatgt ctgggagtgg 8460
gctgtgccca cctcccccag agacttgccc ccaacttaac ccagggccca gcaggggctg 8520
gaagggaagt ggagttaggg agcggagcag gtcaccatca gctgcgccct ggattccagg 8580
gcccgtgtgc acagagtaac gggagccggc tgtctgtctg gccaagggca caggagggtg 8640
agtgtgtaca gcagccaggg agcaagggag ccagagagac acacaggagt gaccttggac 8700
ctctgcgagg aacccgttca ctcgctccca ggcagtagca ctggccctga cacccagccc 8760
tgaaagctcg gagactgcag gacaaacagc ttcaggggct gtggccccag ctgggacggg 8820
ctatgcgctg gtccctagag actctcggta tctcccccctg ccccagtcct gcctcctgcc 8880
cagcacaagg gcctttggaa ctcagccctc tgtgtctcag cccccgggag ggtcaggtgt 8940
cagagacgag aagggccgag gctggcaggc cggaaactgc ctcccttggc tgctgtgggg 9000
tggagtacca ggggacacag aggtgctggg gtgaagcgtg gcttcagctg cgtgggatca 9060
atgccagagg ggatgaggtc agctccgacc aaaggtgtgc ctaggtccga gaggaagcgc 9120
caggagcctg aggcctgtgt tgcacggggc agggaatggc atcctgggct ttcttgcctg 9180
cctcccactc tagccaggtg gagcaatgga cttggcctcc ttgaacaaag accacagcct 9240
cctcagcttc tgcttgtgtc tccagcagac agcgcctgca gcccccggtc atacatggcc 9300
acaggcttcc ccctcctcct tcctgggcca gagtagcagc ctcagcccca tgctggggag 9360
gggtagacca gagacggttc cctcctggtg gtgcccagca gtgactcagc agcgacggca 9420
catgtctggg ccattctcag tgctgccacc ttgagggcat ttgggaggcc caggcaggcc 9480
agatttgtct cctggagaga agtatgggca cccctgggct ctgcctgcct cctggcctcc 9540
ccttgggttc ccttgtacag aaaggggcac tggtcctggc cctggtcctc cctggctttg 9600
ctcagcagcc agcagcccgc caggtctgtg cacaccaagg ctgccgatgg caaagctgtg 9660
ggtggcatgg gacctctggg aatagtcgga aagctctggg ctggccaggc tctgacccgc 9720
cccacagatg gcactttact tctgctcggg gctgctgcag gacctggcac agttcgggca 9780
ctatgcgctc atcatgcccc tgtacacaca cttcacccac agtgggtgct cggtggccca 9840
agaccattca gcggtgatgg tggaggtcca aaggtcgggc gacccaagtg taggggaacc 9900
tgacctgaga actctctcta tgggccggtg ctgcggaagc tgcagggggt ctacagccag 9960
ccctggacac agccgagagg agggcgctga cctcggaggg ctgctttctg ctgccctggg 10020
agctgggtgc tggggtccta atctgtcgtc tggggtggag caccatgcag ctcatccccc 10080
agccatcacc attccccact gcccgccccc caccctcatg ccccatacaa caccgcccac 10140
gaccccgccc cctcttccca ggctataggg agcgactaga catggcgccc gataccctgc 10200
agaagcaggc agaccactgc aacgatggcc gcatggcgtc caagcacatg aaggaactca 10260
gcaccggtct cttctttgcc attctggtca aggtgagccc tccagcctgg tgcccctcac 10320
ctccctctgg ctcccgaccc tcctgggcac ctgctcacca ggaggcctcg aggagcccag 10380
ggcagtgcca ggaggtgcca tggctgcagc actgtccctg caggagagtg gccccctgga 10440
gtcagaagcc atggtgatgg gcgtcctgaa gcaagccttc gacgtgctgg tgctgcgcta 10500
tggcgtgcag aagcgcatct actgcaacgt gagtgccctg ggagagcccg ggggcgggcg 10560
gggcagccca agccatcccg cactggaggg gcacaggctg tgatgggtca cactccaccc 10620
ctcgctcccc cagccctagc acaaagccca cctgatgggc cttgctgaga cgcccagctc 10680
tcccacctgg gatggtggct ccaggcccag ggtcaggcct ggccccttc cccaaggacc 10740
caggaaccag agagcaggcc cctccatggc cagtacagct cggcaaggtg tgcaggcttt 10800

ggggactgtg tttataggaa cgtgaaggaa tgaaaggcca gcgaatggtc cgtggccgct 10860
ctggaaactg tgtcccctga agacaaggaa gagagctgtc cctggctcga ctcctgccct 10920
gagtgactgt tgactcacag ttctctctcc aaggggacat gggcctgtcc taatgctgcc 10980
ttaggggctt ggctccagct ggccctgggg tctgcaggtc accacctgcc cctgtgcctg 11040
gctttgaatt tcctaacatc cagagtgccc tgggaggaca gtgtccagcc cgttgtgtgc 11100
agtaaacgtg gtgttcataa ccgggagctg ggcagaagag gaacgacaga gtccccctgc 11160
ggaccctggg ggctctgtat cctgaagttc aagcctagct caccctgctg tgggcccagc 11220
cctgcctgca ctgacagatg gcaccagcag ggggcgcagc gttccgccgc cacagttctc 11280
tgtccccacc tcagtgcagt cagccctgga cgccccacca cttgccccca atagcacaca 11340
gagccacggg ccttcccagc ccccacccct ggcccttggt cactctcacc tgctgcctca 11400
gccgaaggtg gcctggcagg ccctccctga atctccctcc agccaggcag gggtgggcca 11460
gggccaaggg ccacctccaa gcagtaaagc cctccagggt ggaagggcag gtggccccct 11520
ctgtgtccca tccccttag tcctggcaaa ccctcacctg cctcctgcgg tgcccccctgc 11580
cctcttctgt gtcccctggg ctcccccagc actgcatcct gccgggtagg gtttcaggac 11640
ccccaagccc tcccagctca cccagaccct tcctgagggt cctgcttcct ggcaccacct 11700
tctcttcctt ggggacaacc acagtggaga gaggcagggc tctgcctgtc ctgctaatgc 11760
aggggtgctg gccttctggg gtcctttaga gaacctgatg aaagctatga gtttacaagc 11820
aagaaattgt ctggcaccgt tttcactaac aacatgccct gaaggtggac ccgggccctc 11880
aggttgtgtt ttataagcct tgggagcgct caggatgcat ttgactcccc agctctgccc 11940
tgatccaggg cattcatcct ggagcaggcc cccgttacag acaggcgagc agaggcttcc 12000
agaggccaag ggagggtcct gggggtcctt ctgcagggcc ggaggcagag ttgcgcctcg 12060
tcatcaagcc ctgccatctt tgtcccctca ctgccgggct ctgcacaggt catcaccatc 12120
ttcagcctgg tggaggtggt cctgtgggca gccatggccc tctagtatag tgctgtcctg 12180
aggcagccga gcaaccaggg ccacctggtc cccgaggaag aggaggagga gtaggtcgag 12240
tttgaaaagg aacctgaggt ctgatgtgct ggccaagctc agccaaaccc tcctgcccca 12300
ccccgctagc tttaggaata ggacctgatg acaccaaggg ggatttttaa tttaggtttt 12360
aacaactcaa gggtttgctt ttggttttac ttttgcattt tatttagtgt ttgcagctca 12420
gtttttaaac aaactgcagg ggagaggatg gagctggaag gaaggctgag acctggccag 12480
caatgagacc ggttcccctt ctgcccgggc cccactgcct tctccagccc agggaatggg 12540
gccttttctg caaatcagtg tcagggaata aaatcaagtg tggagtgcca tctggtgtgt 12600
ggggcgcctc tgggaagcct gggcagcgga atgccccttg cacccagggc aagggaccca 12660
gttcaggctc cacccctcac tgctgagccg atgtcaccac ccggaacctt cctgtcagtt 12720
ccagcacgat tcagagtcgg ctacgtggca gattggtgcc ggagtctcat tctgcctgat 12780
taaaaatgga attagtatgc aggactgaga gcgcccccgt caccctgacg catgtgactg 12840
tgtccaaccc tgcccccact tcctctctgc accagctccg cagggcctgg tgggggtcat 12900
aggtcctgca acaccctctc cccgcagttc cttggccaac actctgaatg gccctgtcta 12960
taccctgggt ctgagtcagt gccctggcag ctccaggccc aatcctgtgc tctggggaca 13020
gaagcaggcc tgggcctcgg ggaggggaca agggctatcc agtgccttcc caacctggcc 13080
ccgttgccca cccagtgtcc tgagcaccca tggatcccac ctgccttggg gcctgggcag 13140
agctggctgg ccactgggca ttcccttccc cagccagcct gaccccagcc tgcactcctc 13200
cccctctgtg ggggaagctc cgtggcttgg cgtccccgag agctgctaga aactaggatg 13260
aaagccatgg tgagcacggc ctctgttccc ccgcaccatt tcctggggtg tcgggattaa 13320
caagctcatt tgatctggtt acagtgaatt ttcttcaaag aaacactcaa tagggtccct 13380
tgtcagagtg cgtcgcagcg cctgaatgac agcgactggt tatggctgcc tttgttctgc 13440
cactgtcaga tggggctggc tgtgggaggc gaccaaagac atcccacacc tgccctggga 13500
gcctttccct cctccagggc tcagccacct caggcggcct tcagtctgtg tgtcctgcca 13560
cccccgagat gtcccagagg ccacggtcac cccatctgtt cctgtcccca gaaccttctc 13620
ctggagccaa gtatctgcag ggacagacag gcgagcgtct gggggtttgg tgttggggtg 13680
gagaaggctg tggggtgatg ccccagccca ggcagcctga ctgtgagagc cccaaacagg 13740
agacatccca gccccttccc ctcccctcca cgctgcccac cctatgagga gcagtggcca 13800
atttcctctc tgggcttctc aggccaggct ggccctgtcc cccagggcct cccacgaagc 13860
atgggagctg ttccctcaca ggcagcacag acccggacgg acacctgtcc ctatgtccca 13920
gcgccccag gccccagtaa ggagtagcca gggggtgaac aaggggttcc tgctgcctgg 13980
gcttgtttgg gaagcagatg ctgggctcaa agtttcttca gagagcctca ccttccgtgc 14040
tggccccaga gcatggcggg tccctggagc tgtggaggcc atggcagccc cagcccaccc 14100
caccccatct ggggaagtgg aaaccgtatc cacgagggtc aggtcaggtc tctgcctcca 14160
gtgacctggc aaggttgtgc ccagccagga cctgggctca ggcccaggca gccgccacac 14220
cctacccaga gctcagagaa ggcagcccag ccttctcccc acaccagtca caccgagccc 14280
cgcgtctgca ttcactcctt taaggaacat ggttgactga atccggtgcc gcgcattcac 14340
aggatggctc tccatgggtc cgctgggggc ccagcctctt atgtggcccc tcactaaaag 14400
gactcaacag aaagagtgac cagacaccga ccctcatcta aaggaggact tggccattcc 14460
ctgggctgtc ccacagcacc tgccggccag ggcccgggca cagagcgaga ctgtcttttc 14520
ctcaaggaga caacgtgggg gagagaggga gaggtagaca ccatcaacct cattccatga 14580

ccagggcctg gcgatgctca gaagccagtg agtgtgtccc aaccctgaag ggtcagtacc 14640
ggccccctgg acctaggggg aagatggtgc aggcagtgac ctggcctggg gaaggagctg 14700
aagctcccag agcttgcagc cacccacctg gggagagact gacgcctccc cagttcctgt 14760
taggaaggac ctcaggaaag aactggaatc acacagactg gggtggcagc ctcctggccc 14820
ctgaggagga tgtcaggccg cagaagggag gcacgggcat gaagcttggg aaggggcac 14880
cagaggaggc aaggcctgtg cagaagcagc accagaggcc actgcagcgg ctccaccacc 14940
cagcagcacc gccacgaggc aggaagtggg aggccaggca ggaggggctg tgatcgccca 15000
ggtgccagga ggaagggctg agaggggaca gtgcagatgt ccagagaggc ctggcgggga 15060
taggccacca aagtcacagg tgggatgggc tttctccagg gagttctaca gcacagatgg 15120
tgccgctggc cgggccgtgg ccagctctgc acatgagcct gccccagtcc ttgccgggca 15180
cggaccaaag agtggttcct gggttggaat cacagaattc aggggctaat ggcagtcggg 15240
atgggaattg ggaggggga agtgaattaa atatttgagc cctggtggag gctatacagg 15300
atgttcacgt taaagaaggt tctggagaag gggatgattc ttggaatgat gagtattagt 15360
ttccacatgc ctgagtttag gttctggatt taaaacctta ttgtaagatc atctctttga 15420
accttctctc taattgtggg gtcttatggt ttgggggaaa ttttacttat ttttgttgtt 15480
ggtttttgg tttttggttt tttgagacag ggtctccctc tattgaccag gctggagtgc 15540
agaggctgga gtgctgtggg gcgatcaggg ctcactgagg cctgcacctc cctggctgaa 15600
gagatcctcc cacttcagcc tccccactag gtgggaatac aagcgagtgc caccatatcc 15660
agctagtttt aaaaattttt tgtagtgatg gggtcttact atgttgccag gcttgtctca 15720
agctcctggg ctcaagtgat cctcccgtct cagcctccca aagtgttagg attataggta 15780
tgagccacca tgcccggccg atttgttttt ttaacagata gaaaatcatt tgaggggaa 15840
actgatccat ttaaataatt tattttattt tattttatta ttatttttg agacggagtc 15900
ttgctctgtt gcccaggctg gagtgcagtg gcatgatctt ggctcactgc aagctctgcc 15960
tcccaggttc acgccattct cctgcctcag cctcccaagt agctgggacc acaggtgcct 16020
gccaccatgc ccggctaatt ttttttgtag ttttagtaaa cacagggttt cactgtgtta 16080
gccaggatgg tctcgatctc ctgaccttgt gatccgcctg cctcagcctc ccaaagtgct 16140
gagattacag gcgtgagcca ccgcacccgg cctaaataat ttattttact taaaaaacag 16200
ttttgctcaa cctcgttcat gagctgtgtt gtgttcttaa tgtttatcaa tagtacattg 16260
ctcagttctg gaaagcactt agccagatat ttaaaaagca acagaaattg aagggcaaaa 16320
tagaagatgg aacaaaaact ctccaatagt gtattcaact taacaggttt tcaactcacc 16380
agggtgctat tggaatacaa ttgtcccct ggttcctgtc atacaagatc aaagttaaac 16440
cactaaacac aattgcagca tccttgactt catacacttt cctttccaca catccatata 16500
gacgcccgaa gcacccttca gggcagaatt gtcttttgtc cctcactctc aggggacaac 16560
catgcactag ggcccacctg ccagccaccc ctgccactgt cactactgct ggtattaggg 16620
ggcaggggtg aaggaggtgg ccagatcagg gctcggggtg cctggctgag tgccccctcc 16680
actgagccca ttcctgtgcc tgcagcttcc cacaggctga ggccccagtg tcctgcttgt 16740
gctgctgagg gggctccatg gcctgttgag aggcctcccc aggaagccca tagggaggag 16800
gttggggtgt ctcctgcctt gggggtggga cagtcccttc ttgttcccac cccaggtacc 16860
tgacccaagt tctcctgtgc atgaggaatg cctggatgtc cctccttggt aggtgggatg 16920
ggccagaggg aggtcctgcc tacacagccc ttaattagga atttagagat ttgtgctcta 16980
ggaaggagct gcttccacta ccatttggcc aactgtgtgc tgtgcagacc cgcagcttgg 17040
aaacaggttt caaggatgtt caggacttgc ctcgtgttca taaaggtcag gggtcgcctc 17100
ttgccccctg ctcccctgct aactctgcag caggccctgg actaattaag tccccgcaac 17160
agccccgaga cccaggctct gtgaaagttg tcagaatcaa aatggagcca cttctgtcca 17220
accctaagag caacaacaaa atcatgcggc cgggaggttc tgaaggaggg ccctcccgca 17280
cacctgccta tgatcagagc ccttccgaag cctctgggaa gggcgcagat gcctgcaaca 17340
agacctttt ttatttttta ttttttgccg ggactttgca gctcactatg tgagtcacaa 17400
ggacggctag ccggctgcac aagaacactt gcctaataac gctgtgtcca ctcataaact 17460
tatgccggtt cctgggataa gcccctggaa tcagtgttct cttcctttca aaacggctgt 17520
gtaggtggat gtggtggtga gtgcctgtag tcccagctac tcaggaggct gaggcaggag 17580
aacccgggag gcagaggttg cagtgagctg agactgtgcc actgcactcc agcctgggca 17640
acagagcaac tcaagaaaaa aaaaaaaaaa agacaaaaac caaaaaccga ccatgcactg 17700
ctcctttcgc ctttcaaagc accccttgcc tcccctcctc cgatgcgccc ctagtttact 17760
aaggccgggg ctctgcatgc aatgctgctg cttattccca gttaaactcc atagttttgg 17820
agagcctccc tctgtttctt aaggttgaca ggactatcat tcttttcgtt catagatgag 17880
ggaattaagg cttggagagg ttccgttctg aaggacactc agtaagtggt ggacagagaa 17940
tttcagctca gactcaaagg ctatttaatt tacttctttt aaatccatgc ttcttagcac 18000
tcagctagtc acgtatcacc ttgacaactt tttgccgtag ccacattact gcctgtggta 18060
tgatttgctg aatatttttc tctacataag ctcagatttg ccttaagtct attagaaaag 18120
gaaacttgta actgaaaaat ggaagaccac catctcttgc cataaacaga agcaactgtg 18180
tattccacac acaccaaaag cagtgttctt acagcctcct tagatgtttt gagtctaaag 18240
catgctttat cttgttaaag gggagatggc aaagttaggg tggcagtgaa actaaccaaa 18300
ggtggggaaa ctatgcaaag tccacaaggc atttcttatt tttttctttt tctgagatgt 18360

tgtctcactc tgtcacccag gttggacaca tatctggttg tcaaggatta gggacagggg 18420
aagaggtaga ggaaagaggt ggcctggtta taaaagtacc ctgtggggtt ggagctcttc 18480
agcatctcaa ctatggtgct gttacacaaa cctacttagg tgataaattg tatacacact 18540
cccacacaca tgcacacgaa tacaggtaac actggggaaa tctgaataat aactgtggat 18600
tatgccactg ggggagacta agcaaagtgc acagacatct cttgtacttt cttctttttt 18660
ttttttttgt ttagacaggg tcttgttctg tcacccaggc tagagtgcaa tgatatggtc 18720
ttgactcact gcaacctcca cctcccgggc tcaagtgata ctcccacctc agcttcccaa 18780
gtaggtggag agataatttc agctcacacc caaaggctat ttaatttatt tcctgtggag 18840
ggaccacagg agcaggccat ttcgctccgc taatttttgt atttttttgta aaaatgaggt 18900
ttttccatgt tgcccaggct ggtctcaaac tcctgcgctc aagtgaatct ccgcctcagc 18960
ctcctaaagt gctaggattg caggggtgag ccactacgta gggcctcttg tattatttcc 19020
ctttttttttt ttttttgaga cagagtctca ctctgccacc caggctggag tgcagtggca 19080
tgatctcagc tcactgcaac ctccacctcc caggttcaag tgattcttct gcctcagcct 19140
cccaagtagc tgggactaca ggtgcatgcc accacaccca gctaattttt tgtattttta 19200
gtagagatgg ggtttcactg tgttagccag gatggccttg atctcctgac ctcatgatcc 19260
acccacctcg gcctcccaaa gtgctgggat tacaggcatg agccaccgca cccagcttgt 19320
attatttctt acaactactt gtgaatctat agttctgtca aaaattccaa cttaaacatg 19380
aaactcaggg tggctataaa gcctcctgac tcaccttgac tttggaatca atcaatcaat 19440
taattgagga gacccattag tgagtctcct ctgactttca gccaagaatg ttcctaactc 19500
agcaagatga agcaggaggt agaggaaact aaggggggcaa caagcagggg gcaagaagga 19560
cctatgagag cgacatcttc cctgagagcc ccaggacgac caccgggaag ccaggagggc 19620
gcaggcagga ggacccagga aagctcggcc tgagggaggc cctaggcgtg gtggggagtg 19680
gggcagggca ggcaaaagct gggcagcagg tgaggggacc tgggttctga gggccaagcc 19740
tggggtttga ggtaaacagg ctcgagtgga gaaggggctg ctgtggttgg gctggggtgg 19800
gtggagctgg aggagccttt tcttcttgaa ccagtttttg aattgtggta caaaacacgg 19860
tacatcaagt ttacctcctt caccattttc aagtgtacag ggcggcagtg ttgagtacac 19920
gcacagtgtt gtgcagctga tctccagaac attctcatcc tgcaaccttg aagctctgtc 19980
cctattaaac tccaactcta accctaaccc caaccctaac ccattgcctc ctccctcagc 20040
ctcaggcaac ctccattcca cttctgtctc tatgtatttg actcccctcg ggacctcaga 20100
gaagtgtgtt cgtgcgtatt tgttcttttg cactggtata tttcactgag cataatgtcc 20160
taaggttcat ccatgttgta gcaggtgtca gggtcgcctt tgttttcaag gctgcgtgat 20220
actccattgt atgtgtgcac cctgtttggt ttctccattt ctcttttgct ggacacttgg 20280
gtagcttcca gctcttggct gctgtggata atgctgctgg gaacatgggt gtgcagttat 20340
ctgttcgagt ccctagttcg cattcctttg gctacacact cagagtggga tgtctggact 20400
gaagcaatac ttttgaactc agcctgaggt taccaaactc tctgaactcc ttatcagagg 20460
ctacacttct gggtgttccc cggggcccat ggaaaacaga ctcaccccag gctccatcta 20520
cctgtgcaag ggaacagggg tcaacctcaa gtgcacaggc tgctctggaa gacccagccc 20580
aggtctggct gacccagagc actggccccc tcccagcctg cgtcctcagg acataggtgt 20640
gggcacccat atacaccaag tgggttctag ggcagccagg ccacccagtg tgcctccttt 20700
cacactcctc tggggctcgt gacattacga gccctaaccc gggccctggc ctaggctgtg 20760
tgtttccagt ctcacctctc ttcacacctt gaatgaggtg aatgaaggag tggcaacgcg 20820
tctcccacaa gacactgtga gccacaccca gtcccttccc ttcagcaagg ttggcttcag 20880
gtcacaggac tgggcggggt caagatggac accaggggtg tggggaggga cgtggagcat 20940
ttacagccag gggcaaagtc cttcccctga tttaaaccca ggcagcctgc gctgcagccg 21000
gttcctggtg tccccacttc gcctccctcc tgctgccccc aagacatgca ggggccctgg 21060
gtgctgctgc tgctgggcct gaggctacag ctctccctgg gcgtcatccc aggtaatgag 21120
gctccccaag ctgttccaca cacagggcac cccctcagcc aggctgacct gatctctact 21180
ctccccctgg ccagctgagg aggagaaccc ggccttctgg aaccgccagg cagctgaggc 21240
cctggatgct gccaagaagc tgcagcccat ccagaaggtc gccaagaacc tcatcctctt 21300
cctgggcgat ggtgagtgag caaggcctgt ccagccccgt agtcctcaca gccccggcac 21360
ccgggacctt cagtggttcc aggacaaccc tggggcccag gactcacaca tttctgctcc 21420
ttcagggttg ggggtgccca cggtgacagc caccaggatc ctaaaggggc agaagaatgg 21480
caaactgggg cctgagacgc ccctggccat ggaccgcttc ccatacctgg ctctgtccaa 21540
ggtaagggct gggccacctc agagtcctcc aagcagagga gagggatcaa ggatatggag 21600
tgtggcagga gggagggagc caggacagct ggggcctaag ttaggagctg ggagcagtta 21660
ggatcccaga ggaccagaac caggtccttg gttggggtct gggtgtccgc cccgaagtag 21720
agctcagggt gtctccgttc gcagacatac aatgtggaca gacaggtgcc agacagcgca 21780
gccacagcca cggcctacct gtgcggggtc aaggccaact tccagaccat cggcttgagt 21840
gcagccgccc gctttaacca gtgcaacacg acacgcggca atgaggtcat ctccgtgatg 21900
aaccgggcca agcaagcagg tgagctgggg cccgctgtgg ggtcaggacc aggcccaaga 21960
tctcggtcac cgatcctgac ctctgtcacc ctcaggaaag tcagtaggag tggtgaccac 22020
cacacgggtg cagcacgcct cgccagccgg cacctacgca cacacagtga accgcaactg 22080
gtactcagat gctgacatgc ctgcctcagc ccgccaggag gggtgccagg acatcgccac 22140

tcagctcatc tccaacatgg acattgacgt gcgacccccg ggccaagggc tggggctggg 22200
cagaggggaa ggtggcacag gctcagatcc aggcaaccaa aagcctgatc tgggtcagca 22260
ggttctggag gtggagttgg ggatgtagaa tgtgcaatac aggctgggcc attcccacag 22320
ccctggggag gggagccagg ggctatgcat gaggaggggg cacggggcca gccaggcccc 22380
caaaccacct gccccatcca ttgtcctcag gtgatccttg gcggaggccg caagtacatg 22440
tttcccatgg ggaccccaga ccctgagtac ccagctgatg ccagccagaa tggaatcagg 22500
ctggacggga agaacctggt gcaggaatgg ctggcaaagc accaggtgat gggggctggc 22560
gggtgtggga ggcacggcag ggggaggcca agtgtgtggg tctcagggct gtgggctgaa 22620
gcctggctct gtccctgcag ggtgcctggt atgtgtggaa ccgcactgag ctcatgcagg 22680
cgtccctgga ccagtctgtg acccatctca tgggtaatga cccccttcct gccctggcat 22740
tcctcagaca acctcagagg gtgccatccg agcctgtgtg cccatttgcc agcaccctcc 22800
cgctcacagc ctgccaatca ccaccaagct ccttgtccca caggcctctt tgagcccgga 22860
gacacgaaat atgagatcca ccgagacccc acactggacc cctccctgat ggagatgaca 22920
gaggctgccc tgcgcctgct gagcaggaac ccccgcggct tctacctctt tgtggagggt 22980
gcgtggtggc ccctggggag tggaggaagg cggggcgcgg cagggcaggt tcaagcatca 23040
ccccccctctg gccttcctgc aggcggccgc atcgaccatg gtcatcatga gggtgtggct 23100
taccaggcac tcactgaggc ggtcatgttc gacgacgcca ttgagagggc gggccagctc 23160
accagcgagg aggacacgct gaccctcgtc accgctgacc actcccatgt cttctccttt 23220
ggtggctaca ccttgcgagg gagctccatc ttcggtaggc ctggggagag tggcaggtgc 23280
tgctgcatca attatgaggg tgaagtttga gcctcagttt cctcctctgt caaaagtgtg 23340
taatgctggc accagcccta tagggatctt gtgaggaccg agcccccgaa caggcaaaaa 23400
gtggcggtgc ctggcacata ggaggcactc ccacagctgt ggtcagctca actacaggga 23460
cccgcatctc cctacagggt tggcccccag caaggctcag gacagcaaag cctacacgtc 23520
catcctgtac ggcaatggcc cgggctacgt gttcaactca ggcgtgcgac cagacgtgaa 23580
tgagagcgag agcggtgagt gaggctgaat ggcccgtgca gggggaccag ggtgccaggg 23640
atgggggcat tcgcgggagg aggacgccgc ctgcctgccc tgaagtgcac tcaccctcct 23700
accagggagc cccgattacc agcagcaggc ggcggtgccc ctgtcgtccg agacccacgg 23760
aggcgaagac gtggcggtgt ttgcgcgcgg cccgcaggcg cacctggtgc atggtgtgca 23820
ggagcagagc ttcgtagcgc atgtcatggc cttcgctgcc tgtctggagc cctacacggc 23880
ctgcgacctg gcgcctcccg cctgcaccac cgacgccgcg cacccagttg ccgcgtcgct 23940
gccactgctg gccgggaccc tgctgctgct gggggcgtcc gctgctccct gagtgcccca 24000
ctccggagtt atcctgctcc ccacctccgg gcgtcctgcc ctgttccccg tcctgagccg 24060
ccacttccag cgaacacaca caggtgtcct gccgttggac cttcacctcc tagagataaa 24120
ccagcctcag ctggcgcagc ggggcccttc ttccctccgc atcccccttca gggagcagga 24180
gcccagggcg ccctgggagc tgagcctggg acttccagga cctcccctca ggttgttctc 24240
tgattcttcc tcccaacccc agagactgca gatttgtgcc atgcggctgc ctgcacccca 24300
gacaataaag ggaccaaaac cacccaaccc ccaccctgcc tctagcctaa ggaagaccaa 24360
gcaggcctgg acccagagac gtcccccatc gtgggacacg acacacccag accgcgtgcc 24420
ccaccgtctt agcttcaatc ctggcagcac ctggtagacc caaggacttg ggtggatcag 24480
gacacctgaa gaagagaagc ttccggcaac cctgcaaccc acccaaggag gctactggat 24540
cggggattcc caggggggct ttgacacagt cctctgctgt ctccccacta ggatcattcc 24600
acacccctgc acctgaccaa gggacccatg aggcagaggc ttgccccaag tcacagccac 24660
tcagatgctt cctgcccccc agtgcccatt ccaggtcacc agatccaagg agcgcttgag 24720
gagctctggg tacagggcag caacccagag cccatgggcc ctcccgggac atctggatgc 24780
tgggcataga tttctcaaca aggaagactc ccctgcctcc tcaaggtctc cattctccta 24840
ggagacaaag caataataaa aggtgttaga caatgtaatg ccagtactac ttcctaggag 24900
aaaaatcatg agtgagtgtg ggcacagtat ctggagaggt ggataacgca ggccaggagg 24960
tactgctgag gggcagatga ttgagcaaga gacttgaaca gagtgggggc ttgagcaagg 25020
cagcacagca gtgcaaacgc cctggggcag tgtcagcagg tgctctggga ggccaagggc 25080
tggatcagag gggtgggggt gggtgggcag agtggggaaa gcctgagggg tcaggagagc 25140
ggggtgtgca tgggggactg tgaagtctgg ttagaggggt gtggttggag gtctttgagg 25200
agggctgtga cctgccctgg ttgggaaata agcactctgg ctgctgccag gagaagggtc 25260
tggtcttttg ggcagagggt gggggtggtg gcaggctcag gtgaaagctg gggaaggagc 25320
tgactccagg tgtttctgac ctccctctga aagtattctg gagcgcccat cccaatacag 25380
ccatacttag tgagtacaca cctgctccaa gagaacattg aaaagaataa aggtgaaatc 25440
aaccacattt tccagcaaat tttgcagtat tacaaattta tttgtacatt tacaaaggtg 25500
caaaaaagca tcttgctttt gcaagaaata gtaacatcat tcaatatgct ttcttattta 25560
ctaaaacctt gaaataaaat tgtaaaacat cagtttgaag gcctgactct cagggtagtt 25620
ctttttaat tctgggtttt agtagctgtc acaaaaatat tggaggacca tgatcccact 25680
tgtgaatagc cataggactc cagcctggga agcatagcga aaatctgtgt ctaaaaaatg 25740
aaataaaagg atgaatttta tggtatgtaa attatatcta aattttaaaa aacagattcg 25800
aatatataat ctgctttcaa gtttttttaa atgtgtaggg atcagggttt tatcagtcaa 25860
atacattttt taccacaaaa ttcacatgtc aatgaaaaca ttctcaaact ttggttctaa 25920

aaaatgtttt ctttggcatg agttttcatt ccaagatgat tactttctca ttttttcatt 25980
gaaaggacat ctttaccttg aaggagcaga tgcaagaaaa gtacaattat ttttcaagct 26040
ttttcctgat tgcctaaaac agacagctct tgtcatctca aaagtgtcag cattttggtc 26100
tttaggaagg agggagcccg ggcgcagtgg ctcacgtctg taatcctaac actcgggagg 26160
ccaatgtggg cagatcattt gaggtcagga attcgagacc agcttgatca acatggaaat 26220
cccatctcta ctaaatatac aaaaattagc caggcatggt gccgtacacc tgtaatccca 26280
gcactttggg aggctgaggc gggcggatca tttgaggtca ggcgtttgag accaccctgg 26340
tcaacatggt gaaaccctgt ctctactgaa aagacaaaaa ttagccaggt gtggtggtgg 26400
gggcctataa tcccagctac tccggaggct gagacaggag aattgcttga acctggaggc 26460
ggaggttgca gggagccgag atcacatcac tgcctccagc ctgggtgaca gagcgagact 26520
ccctctcaaa aaaaagaagg agggaggtgg gagtgggggt gaggatttaa aaattaccta 26580
tcgggtacaa gctcattata tgggtattgg gttcactaga agcctaatct ccaccagtat 26640
gcagtctacc catgtaataa acaagcacat gtacccctga atctaaactt ttaaaaaaga 26700
atattcacag gaaaaaaaaa gagttaatca cagggaagca gaaacagaca tacattaaaa 26760
attactgata aatttttaa aaataaggag ggagggccag gcacggtggc taacacctat 26820
aatcccagca ctttgggagg ccgaggtggg cggatcacga ggtcaggaga ttgagaccac 26880
cctggctaac acggtgaaat cccgtctcta ctaagaatac acaaaattag ccgggcttgg 26940
tggcgggcgc ctgtagcccc agctacttaa gaggctgagg caggagaatc acttgaaccc 27000
aggaggcgga ggttgcagtg agctgagatc acatcactgc actccagcct gggcgacaga 27060
gtgagactcc gtctaaaaat aaataaataa ataaggaggg agggaaagtc aagcagagag 27120
ggaggggaac ttggggcaac cctcttcggt attttgctat gaagataagt cattctgtgt 27180
ggctggaaag ttttcatggt ccacccaatc tccttaccaa gtatgggaaa gattctactg 27240
taatgccaca gtcttggctt tataacatta gcccactgat ggtctgcaac attctatgcc 27300
ctccaggctt ctacctcttc cctgcgctga ttagactgtg gatgagccaa tgagtgaggg 27360
gtaagggtga agccacctct gcaccctgat tcgtatccag aatccttttt taaaaaaccc 27420
tttctgagta gctattctat ctgtggttgc atttttaccg tttttcccat atgacatcgt 27480
ttttattaaa gaaggcattt actgttggca atatatcttg tctgctatat cttcccttta 27540
gtggctcaaa aaaaaaaaaa ggaaagaaag aaagaagtgg tttgtgtatt tcattattgg 27600
aatagaacct ggcaaatacc ttcagctgag ccatgttggg aacatctgtg ctttcagcac 27660
actgcaaagc aaacctccca cactgggtaa tttgctctaa catgagtttc ttccaatctt 27720
cggcagtgtt ttctctacat ctttcgatgg tgtttgctga caaagaaatg cctttcggtt 27780
tgtcgacaga tcatttattg ttcattgttt ctgccatttt tcctgcagca gaaagaataa 27840
gtgtctgccc attggtagat gtttttgct tcatgctatc atgcaagaaa ctttaaaaga 27900
gctttccaaa tatttatcat tgcttaggga aataactaag aagtactggg ttgaacagca 27960
cagaacttta aacaccgctg ggaaaaaaac tgctcaggtt tctcttcggt tctgaaagct 28020
tagttttaga caccttgcca accatgagga tttcacactg ctgatgactt aatagctcca 28080
ggcaccaggc acccggggca aacttcagca gtaaccacag agtgggggaa attcaaagag 28140
ttttgtttgc tgatttttta ttttaggggc taacttctgg tcaggtctgt accctgagct 28200
cagccaagag taataaggaa ttctcagctc tcccttctgc tgtggttcac ctgctctgga 28260
tttctggtgt tcattgcaga ttccttacag gaatcttgtg tgagccactt ggccattttg 28320
ggggatgagt tcggttaata ccagatcata taagccgagc gcggtggctc acgccagtaa 28380
tcccagcact ttgggaggct gaggtgatcg gccatcacct gaggtcggga gttcaagacc 28440
agcctgacca acatggagaa attctgtgtc tactaaaaat acaaaattag ctgggcttgg 28500
tggcgcatgc ctgtaatccc agctactcag gaggctgagg caggagaatc attcgaaccc 28560
gggaggtgaa ggttttgaga tggtgccatt atactccagc ctggccaaca agagtgaaac 28620
tctgtctcaa aaaaaaaaaa aaaacaagat catataatcc atcagtccac ttagacgcac 28680
taaactctaa tcctccgcaa tccgctgaaa gcgtgcaatc cagagtgggt attgcatcaa 28740
cccctggtct cgggcaccaa attcctttct tctgggacac cagagaactg cgtggggtgg 28800
tacctgcatg aagggtgaag gcgccagcat ggaacttgat attaaacatg agctcttggg 28860
gcgcccactg ctcagggctg tggcaaggca tatggcgagc tgagcaaaca gtaggcactc 28920
aggagtgcct gacatccctt taaccaaacc ccaaggtcca ggtgagtttt gaagtacttg 28980
agtactgggc aggatgccca ggctgagcaa ctccctgtga gcaggggtat ctcactccct 29040
gcagagcaca gaccccagaa ggcaccacag gttcagtccc cagcagattc gaagcccccc 29100
gcccatcgag ttcccttgaa cccctgcccc tgcacagatc cagtgattgg cacaggaagc 29160
ctccagatcc agcgagagga gcacactccg gcagcctctc gggaggactc aaggggatc 29220
ccagctgtgc cattctggcc tgggtgctga agttgcatct gatcgtgccc tggccccact 29280
ggttctagga acaggcctcc ccaccaggtt agcagctgca taactggcct ctgcccctag 29340
aggaagcctc cctgaatctc agcctcccag aggggctcca gaggccttcc ggaagctgtg 29400
tgggatttgc agttgcaccc cttcatctaa ggcggcccca gggtctactg accccagctg 29460
accattgact gccagtgcac acaccagacc ccaacaccaa caagcagctg gaagctcccc 29520
ttgatagaac cttgccactg gggctgccag tctttgctaa tgtgctggca tggtgcctgg 29580
gaaccagcca catggctctt gagctgccct tcaaggagga aacagaagtc ccctgtcaaa 29640
agatgaggcc accatccacc cttaacaggg aggtggccag gccctggtac cctgttctgg 29700

cactttcttt gttcaccaga tttgcaaatt tgttatcagc cagcacagtt tccccacctc 29760
cacccaccct gtctgggctc cttagagtaa aggaaaattc tccccaagga gctgccttca 29820
gatctctcca cacagattcc tgacagcagt ccctgcaatg gtttggttcc acaggatcat 29880
agaagctttt taaaattatt atttatgcaa aatatagaca aggaaagatg cgatttgact 29940
gcaccatgtg acagcttctt ggggatttga gctgcctgcc ggtccaatga accagccgtg 30000
agctgctgcc agaggctacg ggatcctggg tggcagctga ggttggggaa gccaggaacc 30060
catcttactc ccttgcaacc tgatgagctc atgctggaca caggcccagc tcgggactga 30120
accgtgtagc cctctgggca ccttgaacct tgcaccaggg tggtggggag gctggggagg 30180
aggaggcatt cactgtgacc agtggggttg ctttatatgt ggatgtgttt atagctttta 30240
ttttatgtgt gtgtgtgtgt gtgtttattc tttctttttt attttatttt attttatttt 30300
attttatttt attttatttt atttttgaga cagggcctag ctctgtctcc caagcacgat 30360
ctcagctcac tgcaagctct gctttctggg ctcaagtgac ctcccaagta gctgggatta 30420
caggtgcgca ccaccacacc tggataattt ttgtactgtt tatagagaca aggttttgcc 30480
atgttgtgca ggcttgtctt gaactcttgg gcttaagcaa tgcacctgcc ttagcctccc 30540
aaagtgctgg gactgcaggc atgagccacc atgccccggc cagttttatt ttatttttaa 30600
ttgataaata aaaattgtat atatttatgg ggtacaatgt gatgtttcaa tacatgtata 30660
cattgcggaa tgatcaagtc aggctaatta gcatatccgc ctcctcaaat atttattatt 30720
tctttgtaat gagaacattt aaaatcccat ctttggctgg gcatgatggt tcacgcctgt 30780
aacctcagca ctttgggagg ccgaggagga cagatcacct gaggtcagga gttcgagacc 30840
agcctgacca acatggcgaa accccgtctc taataaaaat acaaaaatta gctgggcatg 30900
atggcacatg cttgtaatcc cagctactca ggaggctgag gcaggagaat cgcttgaacc 30960
caggaggtgg aggttgcagt gagccgagat aatgccattg ccctccagcc tgggtaacaa 31020
aagcaaaact ccatctcaaa aaaaaaaaaa aaaagtaaaa tctcatcttt cggctatttt 31080
taaatataca atacattatt atgaactata gtcaccttgc tatgcaatag aacagcagaa 31140
cttattcctc ctagtagctg taactttgta cctgttgacc aacctctccc cttccccgtt 31200
cacctcccct ctatgcctgg cttatttcac ttcctcttgg ttcatccatg ttgttgaaaa 31260
tgacagaatt tcctgttttt ataaagctga ctagtgttcc gttatgtaaa tacaccacgt 31320
gctaaaaatc catttacccg tttaggaaca cttaggttgt ttccatatct cgactattgt 31380
aaataattgt gtcatgacca tggcagtgca gacatctctt ccgcatacag atttcaatcc 31440
tttgggtatg tacccagtag tggggttgct ggattatttg atacaggtaa ttctcttttt 31500
ttttttaga gataggatct cactatgttg tccaggctgc tcttgaactc ctgacctgaa 31560
gcagtccttc ctccttggtc tcctagagta gagggctgag attacaggca tgagccacaa 31620
cacctagccc tccaggtaat tctatattta gtcttttgag aaaccttcat actgttatcc 31680
aaaatggctg tactaatttg caatgttacc aacagtgtat aatggttccc ttttctccac 31740
atccttgtca acacttacta tccttcatct tttttataac agccaatcta acaggtgtga 31800
ggtgatatct cattgtggtt ttaatttgca tttctctgat gattagtgat attgagcact 31860
tttccatata actgttggcc atttgtatgt cttgttttga gaaatgtctg ttcaagtcct 31920
ttgccttttt aaaatagggt tatttgtttt ttattattga gtcatttgag ttccttgtat 31980
attttggata ttagcccttt accagtgtat gattcgcaaa tgtcttctcc caatctttga 32040
attgtctctt cacgctatta actgtttcca ttgctgttca gaagcttttt agtttgatgc 32100
aatacaattt gtctattttt gcttctgttg cctgtgcttt tggggtcata tccaagaaac 32160
ctctgcccag acccatggca tggagccttt gccctacgtt tcttctagta gttttatagt 32220
ttcaggtctt gcatttaagt ctttgagttg attttgtata aggggtaaga taaagtcccc 32280
ttttcattat tctgtatgtg gagatctagt ttttccaaaa ccatttatta agagaccgtt 32340
cttcccccat tgtccaagac caggtaaagt agcgcatgcc tgtaatccca gccctctgag 32400
aggccgaagt gggaggatca cttgaggcca ggagtttgag accagactag gcaacatagc 32460
aagccccatc tctgaaaaaa acaaaatttt tttttaatta gctcagcata gtggcatgca 32520
cctgtagtcc cagctactca ggaggctgag gcatgaggat tgccagagca caggagttca 32580
aggttacagt gagctatgat tgcatcactg cactctgacc ttttttatgc tctcttaagt 32640
gggattgttt tcttaatttc tttttcagac agttagttgt tagtataaag aaacactact 32700
gctttttgta agttgatttt gtatcctgga actttactga atttgtttat cagttctaat 32760
ggtttttggg ggtaactgtt taggatattt tatatataag atcatgtcag caaacacaga 32820
caatttcact tcatcctttc ctattaggat acctttttatt tctttttctt gccgaattgc 32880
tctggctaag atttccagta ccatgtggaa cagagcaggc atccttgcct tgttcctgat 32940
cttagaggag aagctttcaa cttttcactg ttgagtacga tgttggctgt ggacttgtca 33000
tacatgatct tcactgagtt gaggaacatt ccttgcatac ctactttgtt gagagtgtct 33060
tttgttttgt tttgttttgt tttttttgag acggagtctt gctctgtcgc ccaggctgga 33120
gtgcagtggt gtgatctcgg ctcactgaaa gctctgcctc ccgggttcat gccattcttc 33180
ctcagcctcc cgagtagctg ggactacagg cacccaccac catgccagct aatttttttt 33240
gtatttttgg tagagatggg gtttcatcgt gttagccagg aaggtctcaa tctcctgacc 33300
tcgtgatcca cccgccttgg cctctcaaag tgtgttgaga gtttttttt accatgaaag 33360
gattgaacta tgtcaaatgc tttttctgca tctattgaga tgaatatatg atttcttgtc 33420
cttcattcta atatggtgac tcacattgat cggcatatgt tgaaccaaac ttgcatccca 33480

gagataatct ttttttttt ttttttttt ttttttgaa acaaattctc actctgtcgc 33540
ccaggctgga gtacagtggc acaatattgg ctcactgcaa cctccgcctc ccaggttcaa 33600
gcaattctca tgcctcagcc accctagtag ctggggcttc aggcatgcac taccatgcct 33660
ggctaatttt tgtatcttta gtagagacag gaatttgcca tattgcccag gctggtctca 33720
aactcctgag ctcaagtgat ccgcccacct caacctcatg ctgggatcac aggcatgagc 33780
cattgcatcc ggcccatggt gaatgatctt tttaaggtac tggtgaatag ggttatctag 33840
tattttcttg aggatttttg catccatgtt catcaatgat atagcctgta cttattcctt 33900
cttgtagtgt ctttgtctgg cttggtatca gagtaagctg gccttgtaga atgagtttgg 33960
aagtatgctg tccccttcaa tttttgggaa gggcttgata agaattggtg ttagctcttc 34020
cttaaatatc tggtagaatt taaccatgaa gccatctcgt tctgggattt ttttgttggt 34080
ggtggtagac tcttaattac tgattcaatc ttcttattag ttattagtct gttcagattt 34140
ccaatttttt catgatccag tatttaggtt atatttctag gaatttatcc atttcttcta 34200
ggttgtgcaa tttgttggca tataattgct tatagtagtc tcttacgatc ctttgtattt 34260
ctgttatcaa tggtaacaac tcttctttca tctctgattt tatttgagtc ttctttttc 34320
tttattagtc tagctaacgg tttgtcagtt ttgttcagct ttttacaaac caactcttag 34380
ttttgttgat ttttttctat tgtttttcta gtctctattt cattgatttc tgctctgatc 34440
tttgttattt ccttccttct gctaactttg accttaattt gttcttcttt ttctagttcc 34500
ttgaggcata atattagcct gtttatttga gatttttctt ctttttgat ataggcattt 34560
attgctataa acttccctct tagaactgct ttaggctggg tgtggtggtt catgtctgta 34620
atcccagcat tttgggaggc tgaggtgaga ggattgcttg aggccaggag tttgaaacca 34680
gcctgttcaa cacagtgaga ttccttctct acaaaaataa aaacaaatta tctgggtatg 34740
gtggcacctg cctgtagtcc cagctacttg ggaggctgag gtgggaggat tgcttgagcc 34800
caggagttca aggctacagt aagcagagat tgcgctgctg cattccagcc tgggcaacag 34860
agtgagaccc tatctcaaaa aacaaaacaa aacaaagctg cctttgctgc atcccatgca 34920
tttttgtata ttgtgcttcc atttttgtt catctcaaga tatttttaag tttacccttt 34980
aatttcttct ttgattcacc agttgttcag agaagcatat tgtttaattt ccacatattt 35040
gttaatttcc cataattcct tctgttattg atttctagtt tcataccact gtggttggaa 35100
aagatacttg atattatttc aatctttttc tgttttttg agacagggtc ttgctctgtc 35160
acccaggttg gagtgtggtg gtgctgatca ccactcactg caacctcgaa ctcccaggct 35220
caagcaatcc tcctgactca gcctccctag gagctgggac tacaggcata cactaccatg 35280
tccagtgtct ctatgtggcc caggctggtc tcaaactcat gggctcaagt gatcctcacg 35340
cttcggtctt ccaaaatgtt gtgattatag aagtgagcca ctgtacctgg ccaatttcaa 35400
tcttcttaaa tttgttaaga cttatttgt agcctaatat acgacatacc ttgaagaatg 35460
ttttatgttc actcgagaag aatatgtatt atgttgcttt taggtggaac ggtctatata 35520
tatctgttag acccatttgg tctaaagtgt agttcgaatc ggatgtttcc ttattgactt 35580
tctgtttgga tctgttcaat gctgaaagtg aggaattgca attcactact attattatgt 35640
tgtagtctac gtctttcttc agatccctta aggtttgctt gtttggttgc ttgattgact 35700
gattgtaggg atggggtttt gctatggtac ccaggctggt ctcaaattcc tggcctcgag 35760
cagtcctccc tccttggcct ctcaaagtgc tgagattgta ggcatgcttc atatatttag 35820
gtgctccaaa gttgggtgca catatatctg tacttgttat atcctcttga tgaattcacc 35880
actatagaat gtcactatac gatgactttg tctcttttta cagtttttcg cctaaagtat 35940
attttgtctg ggccaggcac agtggctcac acctgtaatc ccagcacttt gggaggccaa 36000
ggtaggcaga tcacctaagg tcaggagttg gagaccagac tggccaaaat ggtgaaacgc 36060
tgtttctact aaaaatacaa aatttagcca ggcatggtgg tgcatacctg taatcccagc 36120
tactcgggag gctgaggcag gagaatccct tgaacctggg aggtggaggt tgcagtgagc 36180
tgagatcgca tcactgcacc ccagcttggg caacagagga agactccatc acacacacac 36240
acacacacac acacacacac aagtatattt tgtctgaaat aagtatagct acctctcttc 36300
tctttttat cccatttgca ttgaatatct ttttctatcc tttcactttc agtctatgag 36360
tgtcctttaa ggcaaagtga gtcttgtgta ggcaacatat gttgggtctt gttattttat 36420
ccatttagct actctgtgca tttgattgga gaatttaacc catttacact caaactaatt 36480
attgatagat aatgacttac tagtaccatt ttgttcatta ttttctgggt attttgtaga 36540
tcttttgtcc ctttcttcct cttgcttttt ttcctttgtg atttgatggc tttctatact 36600
gctatgcttg ggatctgttc tttttctctg ttgtgtatct attataggct tttgctttgt 36660
ggttacccta aggcatacat aagccatctt atacttaact ggttatttta agttgacaac 36720
aacttaactt tgattgcaca tataaactct acacttttac ttctcctcct cccattctat 36780
gtttttgtgt cacactttac atctttttac aatttttatc ttttaacaaa tcactgtggc 36840
tctagttgtt tttaagtttt acctttttaac ctttgtactg gagatataaa tgatttacct 36900
gctgccatta tggtgttaga gtgttttgga tttgacaatg tacttacttt taccaatgag 36960
ttttatactt tcatatgttt tcatattact actaattaac atcctcttcc ttcagcttga 37020
aaaactcctt ttagcatttc ttgtaaagca ggtctaaaac aaaaaccctc tcagtttttg 37080
tctgagaaag tctttctcac accttcattt tttagagaca gaattgctgg gtatagtatt 37140
attagttggc ttttttcttc ctttcaggat tttgaatgta tcatcccact cccttatggc 37200
ctgcaaggtt tctgttgaga agtatactga tagtcatatg ggggttccct tatacatgat 37260

gattcacttt tcccttgttg ctttcaatat tctttttaac tactgacaat tcgattacaa 37320
tgtgtcttgg tgtggatctc tttggattca tcttatctgg catcctctgg gcttcctgga 37380
tctggctttc tatttcattc cctaggcttg caatgttttc tgccattatt tctttgaata 37440
tgtattctat ccctttctct ccctttcttc ttctggcatg ccaataatgc ataagttgtt 37500
aagctatctt caatcctttt cattcttttt gcttctcata ttagataatt tccagtggcc 37560
tgtctttgaa tttataaatt ctttcttctg tgtgatctag gctgctgttt atgctctttt 37620
tcagttcagt tatagtattc ttcagcgcta tgatttctgt ttagtacttt aatttctgtc 37680
tgtttgttga aattctcagt ttgtttttgt attgctctcc tgaccttggt gagcatgtct 37740
atgaccgtta ttttgaattc agttaaatca catatctcca cttcacttgg atttgttctt 37800
cactggagat tcgtattgtt cctttatttg gaatatcatc ccgtttcttc attttccttg 37860
actctctgtg ttggtctctt tgggttagat aggacaacta cttccctcag tcttgtgaga 37920
ctggcctcat gtagaagaat ctcgccaatc catttaacct gggattttaa gatgtccctc 37980
aaatctttgt gtttgtccag actgctacct ctgtttgcgg tggcccccta gagcttggga 38040
tgtactacat catgttagta cctaatacca gtgagatggc agccagactc tctagatgta 38100
gctggaaagg ttgggtgttg gatatgtgtt ccagttcctt ctatctttac agtgaagctg 38160
agtgcaggca tttgtctccc actttctctg cattaatctg gggataaaat ctgtggcaaa 38220
tgcctgcaca ggcatttgta caggctgcat tctttgatcc tggggagata gctgctgaca 38280
ttgggcccac ctctttgttt tttgtggtct agggccactc aagaatgcaa agccccattg 38340
agtcccagag ctggtaatta aaaacgcagt cccttagctg ggagctatag aagttctggc 38400
acttggcact tggccaaact cctttcatga agaatgggta agcctggatt tatcaccagg 38460
gtgagcccga gagaaggctt atgaagcacc aagctctggt tccagctgtc gaagggctcc 38520
tgttctgttc cattgcccag ttagctgctt tatgcaagtt catttagaag gcagaccgtc 38580
aagtagccac tggaagtgtg taccgagagc ctctcctgga gagcgaatgg gaactgcaca 38640
ttcctgcctc tttctgcact gctccaaggg ggtgtacccc atggaagtgt ttacacactc 38700
atctaaaacc accactttgt tctgtgatca aggagactca catatacctg gtcccttctg 38760
ttcacagagc taggaggttt aggatggagt cctttgggag gtagctgtaa aagttgggga 38820
actcaatttt tggtataaac cctttccagg gacaaagagg gggctgtgtt tttttaagcc 38880
ccttctctgt gctgctcctg ggggatgaag accctggaag tgtttgttgc acctgtataa 38940
aaatgctgct ttcttcctgt ggtctagaga gacacattca tgccagtccc ctttgccccc 39000
agagctagga ggtttaggat gcagtctttc aagtggaagc tgtaaaagtt ggggtgctct 39060
atctgaggga gaaacagggg gccgctcttt ttaagcccct tctctgtact gttcccagag 39120
gataaagcca ctggaagtgc ttgtatgccc gtatgaaact gctgctttat tcctgtggtc 39180
tagagagact catatgcgtc taatctctgc tcccagagct ggtgaaataa gagccaaact 39240
gtggggaact ttagagttag ggtgctatat ttaaggccca aaccctcctc tccacaggga 39300
gaaggaagct ggggtgattc cttcccagct gggtggtgag gtgcccgggg ccatgcccga 39360
atatgcctcc actctcctaa ccattcaaaa tgactttctc cgttgctcaa tgggtaggag 39420
tctcaactgg tctctgattt tgtcttgagg aaactgacct gtgaatagac ctatctggtg 39480
catttctggg tcgggggaga ttcaggagct tcctattcca ccatgctgct tgaggttggt 39540
ttatttctgc tacagcagag tgtaccggct gtcagggagc aggttggcct gagtcagtga 39600
cacagagtaa aataagccac acttgatagt gggggagtag gaatggccag gggaacatgt 39660
gggatagcac ctctaagatg ggctgcaaac aagtgagggc tgagaacccc caacccaagc 39720
agatggaaag gaggccccag agagaagccc caacatgagc cacaacccat gtcacatgaa 39780
cagcagtagg gacaaaaagg ggtatttggc ttggacaaga gaaggaaact gtggctcacc 39840
ttggaccata tgaagaggag tcacagggca ggggtcacac caggacacta ggatgtggat 39900
tcctgctcat tctaaggact ctgcgggaaa ggccaggtca ggacacagct aaggttgtcc 39960
ccaagaggaa ggggtcttga gaagtcgcag ttcctgcccc tcatggtttt ccaggcaaag 40020
ctgagtgtcc gcctgatgga ggctgcagag aagagctgct cttctcagac ggggatgaag 40080
tgcacagctt gccaagggct cagtcagtta tgtgccatct atcgtggact ccaaaatgca 40140
gtgacaagtg agcttataga gcaagggctt ccttggggtg catgggctga gttttccatt 40200
gtcctgaaac cttctataag caataggaag aaactataga tggcatgatc agtggcctag 40260
gttcttctcc ataaagtcct cccaacgaca gcctcttatg gatcaattgc tgtgcagtga 40320
cttagacccg ggagggccag ctgctgactc caaagcctaa agggtctcag cttctcaaga 40380
agcccccttc ggccaggcac ggtggctcat gccataatcc cagcactttg ggaggccgag 40440
gtgggaggat cacctgaggt caggagttcg agaccagcct ggctaacatg gtgaaacccc 40500
gtttctacta aaaatacaaa aaattagcca gggtgctggt gtgcacctgt aatcccagct 40560
actcaggggg ctgagacagg aaaatccctt gaatccggga ggcagacgtt gcagtgagcc 40620
gagatcacac cattgcactc cagcttgggc aacaagagtg gaactccatc tcaaaaaaaa 40680
aaaaaaaaga agaagcctac cctgcaggct gtagagagct gatggaagtg tcctgtggcc 40740
ccttgcaagg ggagcaggaa ggggaacatg ctaattgaaa caaaaacaga ttacagtccc 40800
ttctgcttct taatggatgg tagacagtga aattcatatc tataaaaata accctctgca 40860
gtctcactgg tacagaggct gtggggatgg gagaaggaaa gctggactct tgagccctgt 40920
cctgccctgt cctgctgctg aatgtccttg agagcccacc catggggaca gagacagtgc 40980
tcagcctctg gacaagccca gagcaggcag ggggaaaggg aaactactct ttataatcag 41040

tcctgggaaa gtgggttcct gcaaccagct tcagggagag gggaggagct cagcaggggg 41100
agggaggaga gaaagagaga cagcagatct cagcagctga tgggccacac ccccttggc 41160
accccgaaac ttcagcaaag gctgtggccc acccaggatt gtgtgggtgg gacccgggga 41220
agaaatgaat tagggtgctg cccccatggg gggcatggag gtgggaaaga accagcccac 41280
ccaaggggcc atgtggagaa acccaatctc cccccgcaga acctgccccc agaggcattc 41340
gcatatgaag gactctgggc ttccatccta tttggaaatt taaaaatttt cagccattta 41400
aaaatactgt atctatggca cttaccagct gagccccccc agggtcctgg acatcagggc 41460
cagcatagaa acaaccatag ggatggtggg aacttaaatc caggctccct ggagctagtt 41520
agaatgacct ggggctcagg gctgttcagt ggcaccagat gccatgtgcc ccttcctggg 41580
tatcccagaa atcccagggc cactaagctg ggctcagccc ccgcattcac caatgtcccc 41640
tctttggccc taggatggga agcttgggca caaacccacc tctctgctgg cttcaaatcc 41700
ttcctgaatc tgtacagagg tggcacccac agggccccca gggctgaggg gcacccccaa 41760
catcctaggc cctgagaact ctgaggcaag ctcgcagccg aggcggggga gctgtgcaga 41820
cctggggagg aaacaggggg caggcatgcc gatccttcat cgtggcagct gcaagccagc 41880
gcttgggcac ccgtcacctc tcatctgctg atggcaacac tggagaccat agagggctcc 41940
tcccttgcca aggtcaccag gcagtaaccc ctgggctcaa gtcctgctca caaagctgtg 42000
gatggcagaa ccaggacctg gtgcagaggc tagcccctga ggatactgat ggggacagca 42060
tcgcctgctg aactttggta cacaggtgaa tacctggaaa attttttttct tctcaggttt 42120
ttttggtttg tttgtttgtt ttttgaggca gggtctcact cgcacccaag ctggagtgca 42180
gtagcgcaac catggctctc tgcaacctct gcctcccagg ctcaagtgat cctcccacct 42240
cagcctccca agtaggtggg tcttcagggg catgccacca cgcccagcta atttttgtat 42300
ttttttcaga gatgcggttt tgcccgtatt gcctaggctg gtatctaact cctggactca 42360
agcgatccac ctgcctcagc ctcccaaact cctgggatta caggcctgag ccacctcact 42420
cggctggatg cccggaagtt taagcatagc tgtaaaccat cccagctcct ttatttccct 42480
gcttggccga agattgcttt ctgtcatccc agtgagctgt gccctgtttg tgggagaacc 42540
tgccctcagg gatggatgga accagcccag caacaaccca cccctcagcc acttctagaa 42600
tcacccagga agggccttca cagccaggct gatgtcccct cactgaacac aagggcaacg 42660
gaggccaggt gggtagctat gctgagctca ttcacattcc tcgaccccag tagaatcaca 42720
gtcatcgaca gcccaatgtg gatcctagga cggggcctgg tagacaaaga gatggctggg 42780
actatgcagc gtgcctggtc tcccagcgga acacgtgatg cacccatgct gacacctgct 42840
gacacctgag ctccacaaga ccctgacatg agcagtgtgg ccttgggggc gtgtggcctt 42900
gggggcatgt ggcccatctg ttaaaggggc tcctgccact ctgtccatct cactgggtta 42960
cggtggggat gctcctaggg cccgtctgaa aaagcagttt gggaactagc aggtgacaca 43020
cagtgctgct gggcatcagg ccacttgctc tggaccagcc tggaagccag gaacctcatg 43080
tcttgtccca ggcacctccc tgcacccgtc ctcactgcat cctcagcagg acacagagag 43140
aaggggcctg gccccaggag tgtcccagcc tcattgcatt tcctgagctg ggcagaaggg 43200
acccctgtct gttggctttg ctggctgctc accccacagg ctcccctgat gctgaggcct 43260
cccctaagcc ggtgtggaca caggagggat tggtggtggg taaagctggg aaactgcagg 43320
agcccggggt gagggcaaga gggctaggcc tgcagatccc agttccaacc aggatcccag 43380
atcagagggg cggggtgggc ctcggggtat ggagggtccc aaacaccagg ccccacccag 43440
gagggtggca ggaagaggac tgttgtactg ctccagctgc ccaaggacac gtgtgtgccc 43500
agctcaggat gaaaggtctg gaaacggcac ctccatgggg cctggggtcc tccaaggagc 43560
acgctgtgaa ggagcccttg acaggcagct ctgagccggg ctcggtgccc aggactgagc 43620
ctctgcagtc ttccctgaca cctcggaacc cagtgtcagc tgcctgcaga ctgcgaggaa 43680
gggccccgcc ccatcccgga ctggccactc ccgtgggtat ccttctcagt tccagcctcc 43740
tccgcagggc cacgcatggc tgtcctgccc aaggctccaa taagaaggac tttttaaagg 43800
tctctcaagg ctggggacag ggtgcaggca ggcgttgtct gagcagaatg acaagagctg 43860
ggctggcaag agatttgcca cttccattca tgagatgggg atggccacac cgggtggtgc 43920
ccagggaggg gttaacccct ctaggccacc cccaaaggaa gaataacaga cctgggagga 43980
agggcaggtg cctgctggtc cccctcaatt cagactcggg atccctgagt ggggctgccc 44040
agtaggataa tccccccacc cctgccgccc ctccatgatc aggcagggcc agccggcagc 44100
ctccagcctg ggcagcactc cctgcctctg tccaccctcc tcatgccagg agcctaccat 44160
tcctaccagt cctctccttt ctgcacccca gaagcctgtc tccacactgg aggagaggct 44220
gagatgtcct gtgggtcagc ctcacctcca tgtaagtgtg gatcgctatc cccttctcca 44280
gggaggctga ggccaagggc caggctaaga caaggcagaa gtttctccta cttcagactt 44340
gcaggggtca taagccccag catcaccctg gaatgcgggt caccaggcca tgaggctgaa 44400
ctaggggtgc cccagaactg ggcaagaagc cctgggtgag gctttggggg agggcggctg 44460
ggccagggaa gtactgtcgg ttggtggaaa agatagaaga gtccaggaag gctggacaca 44520
ggcggccaag ccagggcgac caggagacaa gaaggtcctc tccagggtcc cggttgtgct 44580
aagtgcccta gcctccctgc agagggctct ctccagctcc gcctgccctg gggacccgtg 44640
aagaggccaa ggcaacagtg cagtgattta ttgaccagac tttgcagcaa gaacacagcg 44700
aaggtggggc ccgtacaatc cagcctggca gagggtctgg cccccttaga gcagaatctg 44760
gggaccccag tatatttccc tcacagcccc ccaaagtcca gcctcaccct gctccaggcc 44820

```
cctcctgaag tgaggggcag cagggggacc gggtcctgga ggggctggaa ggcaggtggt 44880
gcccagagcg gggctggcac cgggtgcatg cctgccccgg tagccagcag gaggtgattc 44940
gtgcgggggc agtgggggcg tgcaggcggg cagccaggct caccacacgg aacacttgtg 45000
ggcagggttc atgggtgagt ccttgggaca gtggaaagcc cggccaaact cctcaaactg 45060
ggacacactg cccagcaccc tggggtgggg agagacccac acagtgtggg gccctgcagc 45120
cactccagcc ccagcaacca ggggtgactt ttattccttc ccatgccccc tgatcccacc 45180
ccaaacacaa ggagtggaca aggccaggcg ggcaggtggg catacctgta gtgctcaggg 45240
gcatgcttgt cagtcagcac ctgcaggtag atggactgcg accgccgctt gatgcaccag 45300
ttctgggtcc aggagcgggg tggaggggag gaggggata tgaacccagg catctgcccc 45360
cttgcccccc acccagcaca caaggcggta ggccccctca gcaccacagg accatcacct 45420
ctgacgggac aggtgatgac agacaggctg tccatgcgaa gcctgggcaa ggcaggactg 45480
ggactgaccc tggatgccgt gtccccaccc caaggctccc agtccaatcc cccacccagc 45540
ccacctgggc aaaggcaatg aagaagagct ggtcatgtgt gtacttgagc cggggaagtg 45600
ggtgctctgg gccgtgctcc cgcacccact tctgataggc ctggggacac agagagcatg 45660
gacctgctat gcccgcccac cctgggcacc gcttcttctc tgtcctccat ctaggtagcc 45720
ctccctgctc tccctgtgaa ggggggcccg tgaatccttc ctcttccagt ggaccgtggc 45780
cccagcacat gccctgcccc accccaggcc agagctcagc agggtgggca gggagaggca 45840
gctctgtccc tcatctggag tcctcatcag cccccgtccc tcctgcagca ggggtggagc 45900
acaggcaggc cgctcacgtg gtaggccagc ttgaggccgc ccatatctgc gatgtgttct 45960
ccccaagcgt gtgtttcccg ttcacctgcc gggaagggaa aaggccaggg ggctgcttgg 46020
ggcccagctg gcctccctca ggcattgata ccctgggccc cagcccctaa ttcctaccac 46080
ccctctcctt cccttgccca gagagtttga ggggggggctc caaccctact ctttcctccc 46140
aacccgcttg tcctccgtaa gtctgcggac actcattatc tgtccacgtg agtgtgcgtg 46200
ggaaccgaat gtgtgtgcag ggacctgggc acaggttttg tttggacatg tgcacgtgcg 46260
caagggtgtg cgtgatgctc ccggcccgtg ccccaccagg cctgaggggc acaaggggca 46320
ggtgggggtc tcacccgctg gttgtagaca gtgaagttgt catagagacg gacgatgcac 46380
tcagcctttc gcaggaagcg gctgtaggag gcctccgtcc accagtgcag caggttccct 46440
gagcggtcat actggccccc tgtgggcagt gcagcaggct gagacccacc ctcacctgag 46500
ccccctcccc tccccaccca ccagccccag ttaggccatc ccctaccctg cctctccact 46560
gcctgtcctg ccccctccgg gccatcccct ggggccccaa caggcctcac cccagtcgtc 46620
gtagccgtgg gtcagctcat gtccaatgat ggtgccgatg cccccgtagt tgagagacct 46680
gggcccacag cagcagcatc aggccctagc cctccaccct ctgagagccc catgctgctg 46740
cccaggcccc agatgtcccc tggccgggcc aggaggtggc ccagggaggc cacagaggca 46800
tccgtgcggt ccaggggcac atgtgcctca gcttcctcat gcgctatgtg aatgccagtg 46860
gaacctatcc agcttctttt aggaaatcac atctaacaga gctggctggg cagtgaaaca 46920
gggctggagg agacaggagg gaaacggagg cacctacgta ggggtttctc ctcctacctc 46980
atcattagtg ttgcgccacc tttgaaacat caaaatgagc ctcaaacaag taaagaagac 47040
cccaggaagt tacaaataac aaacctacac atttttctaa ataaccaagg atgtagtggg 47100
gagccagggt ccacagctgt cctgactcct gaacccagct gggtctgggg cgattggagc 47160
cacagtacgc cgacacacac ctggtagaca aggtctgcaa tgccagccct gccctcagcc 47220
acaaacaggg caagctatgt actcactgtg ggaagtcagg gtcgtacagg gtgggctgca 47280
ggatgcccgc ggggaacact acaagaaggg ggtgctcagt gggaaaccca tccactttcg 47340
gaccctgccc cgcccggcgt agggacacat ccccttaccc atctggttct tgttgggtag 47400
atagtaggca ttgagcgcct gtgggggggag cagccacctg tggagggatg ctggggtgaa 47460
tgggggggaac acactccctc ccccgctacc ctcacatcac agcttcctcg tcagccatct 47520
cctgacagtt tgggggtcac cctgccggcc cccaccccat gccctgtgct ggcgtgtgtg 47580
ccccccatat ctgcatggct gtgagacgat ttgccctacc agctcctgcc ctttccccac 47640
aacccttccc tgacccccag ctctgggcca ggcacccacg tggacttgtc cacctcctgc 47700
cgaatcttct taactgagag ctggatgctg aagcggatgc tgttcaagat gttcttgaag 47760
taggtcttct catggacctc aaactgcagg aggcacgggc gacactcagc ggcaggccag 47820
ggcagggcta cctgcagact gggcaacaac ctggccgtgc aggccacctg ccctcctgag 47880
tgccgttagt agaggggctg tggacaggct gggcaggcag ggtcagggcc cacctcatac 47940
tccttgtcca cagcatcggg tttcagcagg aagtccgggt agccgaccat caccatcatg 48000
tactggagct gcgggccgag ggcaggtgaa ggtggcacca ggcctcggga gacagccccc 48060
cgccccccac cctacccacc aaggaaggga gcactaggcc agcctgggag tgggcttcac 48120
agttggggag gcaggcctgg tcaactccac gaaggcctct ttgtcccttt tgttctcttt 48180
cgctggtaca cagtaggtgc tcaatatata tgggaccaac caatgacact gggtcccccc 48240
tcaccttggc ccgagcagca gccctggtct cggcgtccat ccagtccagc tcctccaggc 48300
gctggcccag gatgtacttg atgtcttcca ctagctgctg cacctgcagg gtcaggggtc 48360
agggagcaag ggtcaaccca gcagcctggt ctatcactcc tggcaggagg ggtacccctg 48420
cctttaagca ccactttcta agcccaaacc tcatttctga acaccaagag gatactttgg 48480
aggtgaggat ccaggccctg caccccgag ggctcacaag atagaggagg aaactgcccc 48540
agcaatgacc acagacatcc ctaaggccac gcctcccgag catgcctgag aaggtgggct 48600
```

ggggcctggc agggaggtct gcctgcagtt gatagtccac ataagcttcc tggaggagga 48660
ggcctgtgga ggagcagcct ggggcctcag aatcggctga gtacttagca gggcctggtc 48720
cccctgcctg caggggacat gtggggctcc ccatattagg accatggcct cgggagggct 48780
ccaccctcag ttcagcacca tcctcctctc tcaaacaagg gcaacccacc ttggctttgc 48840
tggcagctga gaagtgctca tgtacaaaga gggcgccaag cgccatgcca aagtggcgat 48900
tggcctggcc caagcagacc cgggccagct cctgtggctt gtcgctgccc tccatctcct 48960
gtgccagctc gtgcagtgcc tcacggaatg gcggggacag gtgttcactc aggaccacca 49020
ccacgcgcca caccaggtag ttgtgcagga ccctggggac caggtgaagc cagtgggtgt 49080
ccagacggac atgcatgtgg gccaccaagg gcaccacccc tacctgtgcc cgccaacctg 49140
tggctggacc caggacccag acagccccac aaagaaggga caggggtca tcccagctat 49200
gcagagcaga aaatgtaaag cccacccagc atagaggtcc agggtgcagg ggaaggacct 49260
agtgaccgct gggcagaaaa tgccagatct gcagccatac cggtggggtg tggagcggat 49320
gagctgcgac acctgctgca tgtagtctgt cgccagcagc accacctcct cttcctctga 49380
gaagtcctcc tggaagatct ggtctagcag ccacttccac cgcaactgtg agaccaagga 49440
cagggacagt gaggctaggg ttggcagggg ccacagaaga cagggagggg gcagagagag 49500
gcagcgaggg gacatgagag tccatggcca aggaacggtt tgcccatctc tggggagaga 49560
tgaccctgta gtcccagcag cagcattgcc ctcaaccctg cctgcccacg aggactgggc 49620
cacactcacg tgggggggtga tcttctgcag ctgccccagc gtcaccttgt tgtacatgga 49680
gctgacatct cgccgtaggt cgtcatactc tgacacagtg atctgtgggg agagatcaca 49740
gctgacccag ccctgctcca tgatgccctc cctcaagccc agggcagcct ccagtcctgg 49800
tctgctcacg ttggccagct gctgctccac ttgcaggatc tcttgggcct tctgttccac 49860
agcgtctgca cccaggaggc tgagcactcg ctccatgaac accctgtatg ctgccaggat 49920
ctgcaccagg ggaggggggct cacccaggga cagggacagg cctagcctgg atccaccct 49980
cctggggccc caggccttc 49999

<210> 20
<211> 49999
<212> DNA
<213> Homo sapiens

<400> 20
cctgcctccc catcccatgc cccagcacct tctcactgtc ctcatcctga gcgaggtaca 60
gggtcctctc tggcagggtg agcccatcct ggtcaatctg gggagggaga caggggccac 120
aggtcagagg cccacacctc aggttcccta aacagaggga attcccactc caatgcccag 180
agagcaacca gacatccatg agtacagcca cagaagcacg cagaccccag ctcctctttc 240
cacccagacg agatggccaa agccccatcc ctgactgtcc cagcctgcgg atgcccaatc 300
ttacccctgt acgtctgcac tttccttatc tgtccggggc attcgtaggt cccccactga 360
cagttgggac ccctagcttt ggggccagct ccagacctcg cggagacgtc aacccagccc 420
gccggcgcgc ctctccctcc tggccctcac tgcctgccag agggctggga aattgcggct 480
cccgcggctc ctctaaacac cgcaattacc ccagggaaat tacttgcgcc ctcctcccgc 540
gctctgcctc tgtgcgctcc cctcccctcc cctctcctgc tcgtctcttc cctcctctcc 600
tctcacgcac ccgcctcccg cgcgcaggga cccctgggca aggccactgc gccccggatc 660
cgcggccgct ggcagggcgc tcaggggggcg cactcacgcg gatgacgtag cgcgaggagt 720
tcctgtcgtc caggctgacc gtgagcgaga agagcgcggc ggcgctgtac acgccctgcg 780
ccttgtacag cagccggttg aggtcccatc gcgccgcgac ccccggacgc tcctccgcgc 840
cgcccaggtc ccagcccccg cagtcctcga tgacctctag catgggtcgc gggcccagtc 900
gctcgatctc gcgcatgtcg aggcacgagc ggaagaaggc gcgcaccttg cgctgggccg 960
cgccgccagg cccacccccg ggccgcgcca gcaggcgccg taggctcctc gttttgctcg 1020
ccgatggccg cgatggtgcc ataggtgagc ttgtcgtcgg ggatggcgtg gcgccgcagc 1080
caaccgccgc aggcaacgag tagaagtcct ggcatgggtc gatgctggcg tccaggttgg 1140
cggccaggaa gcgagcggcg cgcgcgaagg ccttgcgctc agggcagccc tcgggacagg 1200
cgccgccgcc ggccgcgacc gggcccaggt acttgagggc cagcatagcc gccagaatgg 1260
cgcagaggcc ggcggcgaac accagccccg acagcaggca cacctcgcgc cggttccagc 1320
gcggcagccc ggaccgggcc ccggtggcgc tgcgcgcacg cccaacggga agcccggggg 1380
cagggaggcc ccgcgcgcgc cccccgcgcc gaacggcttc acgttacttt gaacctcttt 1440
gggaacttca tccgtagttg cggccggtca agcggaatta cgggggggct tccattggcg 1500
gcccgaaggc ccgccggcgg gttgcaagaa ccttggggcc aaacttgggg gctaacgggg 1560
gatgtccccc ttttggccgg cccgggcctt cccttccttt gggggccttt ccggaaattg 1620
gggccccttt aaaaaaaaaa aaaaaaaaaa acgtacttga cctcttggaa ctcatcgtac 1680
tgcgccgtca gcgaatacgg gggctccatg gcgccgaggc cgccgcggtg cagacctggg 1740
ccacctgggc tacgggatgc gcgtggccgc cggcctcctc gtgggcctcc gcatggccct 1800
ggggccgcag ctgcgggaag ggcggaagca ggctcaggag gcgccgcagc cggatggggc 1860

tcagggtcac cgcgaggagg gacacaggcc tgggtgcaga ggccccagcc gcgggcctca 1920
ttcactgcgg aaaccaggga ctatgagggt tcggcggggc caccaccccc gggtgcacag 1980
tggagtcttc ccccctgtcc cctccctgca cacacttgag ggccgcaggg ttgggagggc 2040
tcttattgga agcaagaggc gccaggcaag gggcctggca cgtagtgggc cttcattgaa 2100
aggtcgtccc tcttcccctt cgcccttctc ttccacgacc tgccccagcc aaggccgggt 2160
ggagtggggg aagaagcgga ggctggagtg aggaggtgcg gtcaggggcg cgtctatgcg 2220
acactttcag ctctccgcgc tggacccaga cagacgctcc gcaaagcggc caaagaacca 2280
aactttgtcc tcgcggaagt ccgcgggatc gaccacgcca accccgctcc ctggctcctt 2340
ctgctcggtg gcccgacggc ccactcgccc cttccctagg ggcgcgcgcc aacgccccag 2400
ggtggcggac acacaaccca cccactggac ggccctgatg gagaacccga gacgggttcc 2460
ctccccccac tcccaccatc tctgtccccg ccccgagcca ctcctggctt caacaggttc 2520
tccccagaac ccaaacttgg gcgaagtttc acccccggcg gggagcgagc tggctggcga 2580
cccccgagcc ccggcgccgt gcggcgcagt ccgcggagcc cgagagccga gcccgggagc 2640
cgcagccgca gccgcagccg cagccggagc cgcagccgag aggacgcaga caaagccggg 2700
aggctccgcg cagtggcggc ggcggcgacg gaagtggccg cgatggtggc ctcagcggca 2760
gggactcggg cgccacttac ccggcaggtg cgcgcccgag ccggcggtga ccgagcgggt 2820
cgggcccgag cgggggcctg agccgcagcg cagccgagcg ggcgtccggt gtctcccagc 2880
gcccgccgcc tcctctgccg ccgcgccgag cccgccgcgc cgcccgcctg ccggcccgag 2940
ggaggggcgg cgccggcggc tccaccctcc tccgcccgcc ccgcgcgccc ctccttcctc 3000
ctgcatctct cgggccacct ggcagtgggg cggcagcgcg gacgtgggtc ggcggccgcg 3060
gagacaggct cccgggggtc gtgcgcgggc tgcggtcggg gactccgggt ccagccgcgt 3120
tccgagacga gtgagggcag cgagtactcc cgtgaagggt cccctccgat ccagtgtccc 3180
cactcccagc cgcccaccag ccggctggaa aggggctgga gctggagatg aggagccgag 3240
gactcctccg aagggctggg ggcggtgtca gtagtgcctg tgtctgccgg cacagtccct 3300
ggcgcagagc gcaccttcac taaccggctt ttttgtcctc cttggaaccc ctgccctgga 3360
tgggctctcc actagggctt ctggttggcc tcgctccctt cacctagccc ctggtgaagg 3420
gagctcagcg gggactcctg caagaagagg gcttgccgcc cccttcccca tcctccccag 3480
ccttgggtgg ccctggcacc acggctcagg gagtccctgg cccaggtagg aagaaaaggc 3540
caagagaaga atgagcgaag tctccctgct ggagccaggg aaggctggag cctgcccccc 3600
ctggccagca gccctaggcc tcagacaggc cctgagcctc aagaccctgg tatgtggact 3660
gatgggaggg caggctgggt gcagggactc tgaatttact caccgcctgc cttcttccag 3720
gtaaactggc tttttaaatg tggggcctcc ccactgcctg gaggcaaagc cctattctac 3780
ctgcctgcct gccttggcca gacagcctgg ccctaatggg acacagagaa cttggggctc 3840
cttggaagac tgatactgtt tctggagtct ctgctttctc tgccctaccc tgcctctggt 3900
gtctctagca ggagacccct caaagcacca gccctcccag gtctgccggc tccagcccgt 3960
aggattggct taaacaatgt gtgagagcca tggagcacca tctaataaaa atcacaacaa 4020
ggtagggact ctgataacct acccatcatc ctgttctcct cctcagggtc tgtgcatctg 4080
cccagctcct gagccctggc cctgagtgcc ggcctctgcc cctgtcttgc ctctccctgc 4140
ctcttcatct ctccatctct aagcccccac tccggatacc ctgcctccat ctctggccac 4200
cccagggttg tcctctgccc catgcatcct tcttgggtcc tattaattct aaagaggaaa 4260
aatggaatta cttataatgt ggcgattcca tgaaggggag aggggagggc agggaggtgg 4320
caaagtggct ctttgtgctt ttaatctgca tttttccctc aatgttcccg tctccaggag 4380
gataattttc cagccttttc aggccctgat tggtatcatt tctccagcaa ggacagcttt 4440
tattttcccc gaaatgaatg ccatgaaatt tccaagaaat gtaaaaatgg atattgtctc 4500
agagagcctc ttccgacaga aaggcacaga ggcaaacacg cttccctagg gactcttctg 4560
ctccagtccc gggggtgggg tgggggcac cccccaggcc ctcattctct cctccctcct 4620
tttgccctcc ctcatccctt cctcctccct cccgggtcag ctctgggacc ccccttccag 4680
ccaccctctc ccagatcagc tgctattggt ctgctcatgg gcctcccgac tccctgccgg 4740
gcgacctgcc tggctccacc tcacctttc ttttcacatc gcatccccca gccccgggct 4800
gagagcagca accagggcct acaggagttg acttggaatt gggccctctg acccctcagt 4860
cctggccacc ccacacagac tgccaataaa gagaagtcag aggcccacct ccttgactct 4920
ccggcacctt ctctgtaagg gaagctggca ctgtagggga gtaggcacca gtggtctggc 4980
ctgtagcttg ctcactcttt tgggggatct cttcctaccc ctaattacca agatgacccc 5040
atgactcatg agaaagagaa tgacaggcca cagtggtgcc cagctaaacc cagccaagcc 5100
ctgagtgagg cagctgggtg cccagcttca gggagcagtt gggtgctgcc agagctgcct 5160
tggagagaaa aggcccgagg ggatgcaagg gggcagagat gaggggttca gaacctgact 5220
ctctgtctcc tccttgacca agggtagatc ccagcaactc tgccgaacag ggcatcactt 5280
ggtttgggtt ctggacatag agccctccct gaggacagtg tgctgtcacc agtagcttgc 5340
atctgttgca cgttcaccat gtgggctgct aagtgccctg ctctgaggtg gggctgccca 5400
cctaacgccg ggcctggtcc tgactggagc ccatttgtgg tcggacccgc ctctctcctg 5460
cggcctgcac gtgggtgggg atgaacccct tgccctgcct cggtgtgctg cagcagggtg 5520
tcagctccag gacgagcccc gccagcctcc accctgtcca accaggccct actcctcccc 5580
tgcagatctg tggtatcttc tgagccctaa aaacacgcct ccagccagct tcctgtcctc 5640

cacccggcct ctcggggctc atcccatcta ttattcacag cacaaaatgg atttttaatt 5700
tgagaaatga aatgactctc ccaagtggcc ggggtggcag ggaggggggtg gaggaaggcc 5760
ggagccgccg tggccgccac agccgccacg gtgctgactc aggttcatct tggaaagctc 5820
ggggcccaca gccgaactga gagaccccaa aggcccagta ccccaccact ctgccccagg 5880
cctccactcc tccccattgc tgtgaccagg tggggtgacg ggtgcccgtt ggtcctgcct 5940
gagcctccag tggggcctac ctctggcagg gcggtcgggg ggacagctgg atctgtcctc 6000
cactggcttt cagattcctg tgcctcaagg gcagcccttg ggctccctgg cctggcctat 6060
cacctcccca cacccccggg ccctcctggc ctggcttcct ccaccctgtc cagacctctg 6120
gctgagctcc tttgctaggt cctgacccca cactaggccc actccggcct cgactgctgg 6180
cactggcctc cgctgctgga cacctggcct ccactccggc ctccacggca gaaccctcc 6240
tcacccctca cgggggagct caggcatctt agtgtggccc acaaggcagg gcctcctcct 6300
ggctcttctc tgtctttgtc cctctctgcc tccccacccc catacctccc tctttcctct 6360
ggttactctg atctatttcc atttcccaga acatggctgg ctctgtcatc cctcaggcct 6420
tagcacttgc tgtttcagct gcctggaaca cccttccccc gtcccctctt acggtggcca 6480
attgccaacc atccttcagg gccacctgga agtggcctct cccatctggt caggtgctgc 6540
ctccacaggc ccctactcca ccggatgcaa agtctctcct atggcagccc ctgttcttcc 6600
cctccaggta gcccgcggcc ccttctggag cccaggacag gggacgcata tgataaactc 6660
aggtgacgtc cgtgatcagt tcatggagat gccctgcctg aagcatctct cagcgccaag 6720
ccatacacca ggcacagcac ccaggcaaac ctgcccaggc tctcagatcc tgaacacctt 6780
tcctttgctc tggaacccac cagatgacaa agtgggggcc acttttccac cctcctgcac 6840
ccctcctctc cactctgaac cccgtggtag gctttgtcct cgccatgcat agactcctct 6900
tggggtcacc tcccaacctc tggagcaatg ttgtttttgt acaagaaaca tgtaaatatt 6960
ctcttgtttt aaaatattga agccacacaa gtttgtagag gagaaacatg aaagtcctcg 7020
ttcacgcagc ctcagccctc ccaaggtaag gccaggtagg ctctgcgacc actgcagggg 7080
gagcatctag gcccacctgg gtatcacttt attttatcgt ctttttgtt gttgttttag 7140
agatgacgtc tcgttgtgtt tcccagagag agtgcagtgg tgcaatcaca cctccctgca 7200
gcctggatct cctacgctca agtgatcctc ccaccttggc ctccaaagta gctgggacta 7260
caggtgttcc taccatgcct ggccaatttt tttttattgt gtagagactg gagtctcgct 7320
atgttgccca ggcttgtctt gaactctggg tgatccgcct acctcggcct ctcaaagtgc 7380
tgggattata agtgtgggcc actgtgccca gcccttactg atttatttttt aataaatagg 7440
acacaatagg atggatggtt gagtgcctct cctccccatg tggcctgtgc tagtgtttcc 7500
aagccagagg tcctcggggt caccctctgt gactgaggga tacttaggtt gtctcactca 7560
ccccatctgg tctccaaatc ctaaggcctt ggcccagagt tttgcctcgc actctccctc 7620
tctgcccgcc ctgtcccacc ttccctgcct cctgcccttc ctccatcccc tggatgctgt 7680
gcccaggtgt ttggctctgg tcccaggtcc cacccacacc tgctggcgct ggaaactcac 7740
tgcactccaa acccagcctt ggaaagactt ctcacctcct cctctcattc ttatcccttt 7800
cctgtctcca gctctggccc ctcctcctcc ctttcttagt ggagaagggg gtctctccct 7860
ccttgcctac ctgggtgctg ctgcagttct gcctgttccc agccacagcc tcggtgtagc 7920
catggccact gtggcttctg aggcctcctg ggtgtggtcc cctcatgctc ccctgagtgt 7980
ccctcctcta ccagcatggc atactcatag cacagccttt gttcgagctg tcccctctgc 8040
ccaacttctg tgtccccaga cctgtgtccc tcctttaggt ccatctcaag cttccaggat 8100
ccccctgaca ggcccccacc tgaggaagct gcccaagggc ccctggcacg gagggatgca 8160
tgccccccag tgcccagccc ggagcctggc acgtgacccc agagcagggg tgcccagagc 8220
ctgggccagg ctgaatggaa caaggcccca gctccaacct ggacaggcct gtcgccaact 8280
gtgggtggaa cagccactgt cacatgcgga gcggctccca agcgccatgc tttgcgccaa 8340
gacctctatc ccctccacac tgaacctcac gctgagtaag cccacgaggg agccctgtcg 8400
ttgtccccag tttacagagg aagaaactgg ggtgcataga aggaaaggaa gatgcccagg 8460
ttcacgcaga gactcagtac tgaaacggag gcttgaccct gtgtctgctg cattcagagt 8520
cacagggcca tgcacactgc gagctgggag atggaagaac agctctgcag agggcagcag 8580
ggcactcagg aacccaagtg acggcagctc ggagccaggg tcccagcctg ggacctcagg 8640
cccagaaact gcgttggagg tgccaaaggt ggctttgctc agcgacctca ggaggcatct 8700
cagggcgtgc agccgggacc ttggcctccg ttccgatgtc gccacctcca caggcccctc 8760
ctggatttcc ctatctgaag aggccaagcc attttctgtc tgtggcactg ggtacatccc 8820
ataccgcatt tgtccctacc tgacgttatc ttgtgactcg ctattttcac gacagcctct 8880
cttcctcagc tctgctggaa ccctagattt tcctattgcc ttgtccttcc tacccaacct 8940
ttaagtggca aggccttggc cacaaggcag ggagtcagga gtgggggcca gatttgcagt 9000
caaagtcgga tagtggctat gggggacagg aaggaggggg cagtggagag tctccggcca 9060
gtggtctcta gccctgacaa gcaggtccct tgggctcccc atctgatgga caggccacga 9120
caggagctca gctcctgctg caagagggat gcaaatgagg ctgtgggggc tggggacacc 9180
ccttcctgtc agggtctcca tggcacattg cctgggactg caaggaaggg cgagcctggg 9240
acaggcagag aagcctgaat ggcctggagg gccacttcct tggctgccag ggtcctgggc 9300
ctgcagtccc ctcccccagc actccatcat catttcaagt gattggagct gaaggggatc 9360
gttagctaat taaagctgag gccactaatt gtccctttg aagagagagc agggctgtgc 9420

aggggaggag acagagggtc tggggagggg gatattggca ggcggggggc tgggaacagg 9480
gccatggccc cttgtggggc cttcttccag actgtgtgtt tgaggggtca ggcattgtca 9540
gaagctcctt aaagtgggta aaggactaga gaagcagatt tggcgctccc gtgattcacc 9600
ctgcatcact gtgaatatca gtgcccacct ctgccccacc tctacccact gccacccacc 9660
ctggggctgt gggctggaca gcacatggcg aggcctccca caggcctcct cctctgttgt 9720
gttgataggt cagattggag gacgggcaac tgggtacaag gttcccccaa ctccagcacg 9780
gcccggagca ggaagcctgg gtggcaagtt tctgccttcc cttccacctg tgacagcctc 9840
ttggggaggt gctcaggcct gccaggagta gccagctgca aggtgcatat ccacatgtca 9900
ccggagagtg ccagctatgc ctggggctgc ccctcagcct ggcaccaagc tcccctcttg 9960
gcaagaggtc ccagagcctg tgacagaact accaaagagg gttattagtt ttgtattgct 10020
gcaaaacaaa gtagcacaaa catagctact tacaacagca ccctttttatg acctcacagt 10080
ttctgtagtc agtggtccag gcacggcatg cgattctctg cccatggccc cactgcgcca 10140
aatcgagatg tcggctgggg atacggcgct catctggggt tcaggggcct cctctaagct 10200
cagggtttgt ggcagaattc agttccttga agtgctagaa tcaaggtgtc cactttgggg 10260
ttctgctgtc agctcccaga ggccccctcc atttccacag ccagcaatgg agaattccct 10320
ccagtggagt cttccacttg cttcaagttt ctgttttcct cacactgacc agcccgggaa 10380
actctctgct tttatttatt tatttttttaa gagacggggt ctcactgtat tgttcaggct 10440
ggtctcaaaa ctcctgggct caagcaatcc tcccaccttg gcctcccaaa ctgctaggat 10500
tacaggcatg agccactgca cttggcaaaa ctctctgatt ttgaagggct catgtgctta 10560
ggtcgggccc accccaataa tctccttacc tgaaggtcaa gtcttttgga accttaatca 10620
catctgcaaa atccctgcac accagtcccc agatttgtgt tcagttgaat agcggtggga 10680
tgcgcatgtg tacaccgggg gccgggaatc ttgggggcat cttaggagtc tgcctaccac 10740
aatgatgtgg gtcagagaac aaagacagcg ctgaggatag aagcagctga cttccaggcc 10800
aggccctggg cattagtgct gaattatctc attcactcct caggacaatc ctaggagtag 10860
gtgctactat tatcccattt tacaggggaa gcagctgagg ccctgagaga ttaagtgact 10920
ttcacagtca cacagccggt aaatgaccac actgagagat taggggtatg tggggtctga 10980
tccagacccg gctgtgtgtt cttaggaaag tcatgtacct gctctgggcc tctgggaaat 11040
ggatgctgag gtctgttccc catagacaag tgggtgagac ttggggccat gttgcaggga 11100
ctcagcagtc taatctgtgc ccccaccaca ggtagctggc atctgtgaca cccaatgagc 11160
tggggtccct gctgtcagct gtccattcac tgccagtctg acttcttttt ttttttttt 11220
ttttttgag gcaaagtctc actcttgtcg cccaggctgg ctgcagtggt gggatctagg 11280
ctcactgcaa cctctgcctc ccgggttcat gcaattcttc tgccttggcc tcccgagtag 11340
ctgggattac aggcacccgc caccacgccc ggctaatttt tgtactttca gtagagatgg 11400
ggtttcacca tgttggccag gatggtctca aactcttgac ctcaggtgat ccaccctcct 11460
cggcctccca aagtgctggg attgcaggcg tgagccacct cacctggccc agtctgacct 11520
ctacaaccca gtgatgatac tccctaacat tgaggctggg aggctccaca gtacaggaac 11580
cccaagatta atggccagga aactgctgct cctccatggg ggctgggccc ctagacaact 11640
gagtggaggc ttgcagacct ttgcccaggg gtggtcgtgc gtgtctgtgg ggcgggtccc 11700
tcctacccct ggggcctggc tctccccact catctggctg cagctctgga aggtagggga 11760
ctgcagaggt gtcagtggct gcccactccc cctcccatga gaaaggctgt cagcgcccca 11820
taggcggcct ccccccccagc ctccaccccc atgcttcagc ggcctccctc agtaatgggg 11880
ctttatcata gcatgcatta gctaaggcct gctgcctgca attatcccttt caatcagcca 11940
cccaccaccc accgccccca gcctcaggcc acccacgggg ccacctcacc cgccctccct 12000
gccccatccc caagtacagc acaggtgccc aagtctctgc agatggacag agcagtgacc 12060
cctggcagca ggcgcctggg gcaggggcag ccagcggaca gagagctact gctcagggtc 12120
acaggcaatt attttaaaag cctgttgcag gagaatgcgc tgcctgtcca gcacaacctg 12180
ctcatcctga gggttgcacc gccccaggtt gctgccaggc tcacgtgcac acacgggtgt 12240
tcacacgtgc cagtcatgca cacagggacg ggcactgcca gggcacacgt ggtgtggatg 12300
cagagccctg tggtctgcac gcagacccca gagagatggg gtcctggcca ccctcgaggt 12360
ctgcgcagaa ggaggcccca cttgcccaag cagccctcat catttggggg ctttccctac 12420
agcccctggc accctcccac ccccatcccc agcacagacc acctcctgac ctttgactcg 12480
cccaccccac gcctggggta cagggacggg ggcctgagct gaatgggagg acttcctgtc 12540
acatccagcc tcacgctggg gttgcgagga gaaataggcg agaaggcgga cctggctggg 12600
ggagtggagg aggggaccgc tgttgtgctg tgattctctc taattgctgt tttgctgaga 12660
ggtaattaaa atctcttttt atttcacacg tcagagcctt cgctagcctg tggagagggc 12720
gcaggggggag gctgggggggt gggggcagtg gagagccggc gcatggaggg gtcagggagg 12780
tgaagcatct gagcccagcc tgcctgccag gagcccccag ccctgcccgg gcctggccta 12840
tgaccatccc gggtgcagcc caggccaggg gtctatgcag cccatcaaag ccaatgaagg 12900
tcatgataat gaagtcagtc agcaatgtct ctggggtgcc tcccaggtgc aggtgttctg 12960
ctgactgccc aacctgtgaa aaatacaatc atgaccctat gtgtcgggac agagataaag 13020
ctgagacttg gggagattac gaaacagcca gggtttctta acctatggct cttcagtggt 13080
ggaactggat gtgaacaggt ctgactccaa actcggaagc accgcagccg cctgcccatc 13140
cagcccacat aactgtctcc tcctgtggac cccacttgag gtccacagcc ctaccctgac 13200

cctcctcaga gcccatggga tgggccacag ccttgggact cctgctcaag acccatgcac 13260
cagtccatgc ctgccactct ggaccccatg atcacctgct gacaggtcct ttgggtctgg 13320
agaaccggga ctcacatcgg ccaccaggac ttgtggatgc ttcccaaaga cctgggaagg 13380
ccaggggccc atggcgagac cagagccccg accaatgccc agccagggtc aggcaggaaa 13440
gaagagaaac ctctgccttc tcctgggctg gctggaggca agggggttaa cagtaggtgg 13500
ggtaggcaca ggatccacag agaagcaccc tttggcttca tacccctgca tcaccaagct 13560
tcctatgtgc cttgctatct ttcttcacta gacctgaatt gcagcacccc atccttgtca 13620
tcctcccctt ttctaccacc atcagcacca tcaccttatc tagatcatcc ttttcgccta 13680
attccccaac atcatcacca cctccatcat catcatcatc atcatcatca tcatcatcat 13740
catcatccct ttcaacaaaa ccgtcaccac catcatcgcc atcaggactc accttgtacc 13800
tgcactgttg catctcactg aatccttgca acacctacca aggggcaggt accattatta 13860
tcctcccact ttgcagggtg aggagaccat agcttacaat gaaggggctt ttccaaagtc 13920
atgaccagga agtgtcagag gtaggacttg aacctaaact gcttgacatc agagcccaaa 13980
gtcataaccg ctatacttta ccacagtcca tcaaggggtt ctaaggaatc aagctggggg 14040
agggggggcaa gggggaagga aagtgggggga gagcaacttg ccacttggac tactcaggag 14100
cagcagcatc agaggcaggc cctccctgca gccagcctgt gctccacccc cactggtgca 14160
tggcagttgt gcccaagcct ccctggctga gctttctacc ctgcagagtt gcatagaggg 14220
gatgttaaaa gggactgtgt tgacttgaga agctgaatcc tagttttgtc tccagtcaga 14280
tggaggccag cttgccccac ctccctcaac atcccctcac ttctgggcca cggctggctc 14340
tgggggcgct cattcacctc tcgtgggtgg cggccaggct gaggatggac agtgtgttcg 14400
tttgggctgc tacagcaaac acgacgggct gggtggcttc aacagggcgc gtgtatcctc 14460
acagtcctgg cggctgggtg tctgagacca gggtgccagc acggctggct tccgctgggg 14520
gcctcctggt ttgcagatgt tgtcccctgg ttgtctcctc ccacggcaga gagcagaggg 14580
aggaagcatg ttctctccca tctcttctta gaagggcaca catcccatca tgagggatcc 14640
accctcatgg cctaatcacc tcccagaggc cccaactcca gaggccatcc cactaggaat 14700
tagggcttca acacaggaat ttgggggaca ctaatatgca gtccacaata gacagtgagg 14760
ccagggccac gcggcagccc agccggaccc ttggtggtgt ctcaggacag gttatggcca 14820
agagaaggct ctttcctcag cctgccagcc tccctctctt cagccttcct tgtccccagc 14880
cacagcccag ggcattggcc ttgaagtatt gttcccctag ggtggttgga gtgggcagcc 14940
atatccccag acacgagcca tctgatgggg gtgctgaggt gggaaatggg ggcccggggg 15000
actgcagagt aagaattggg ggtccctact acccatctga tgggggtgct ggggtgggaa 15060
atgggggccc gggggactgc agagtaagaa ttgggggccc tgaggcccac tggcaggtgc 15120
tcacctctta caggcaggga tgaggaccca tgtgtgcagg cagctgggtg gactgactca 15180
gagttaagca gatccgggaa gcaagggaca gagggagagg ggaagaggcg aggactgccg 15240
agcagccctg agaggagaag ccggggcttc ctggggctgc aggagtgggg taggggctgt 15300
ctcagctgtg tgcagcagcc tgggcctggg ggtagggaag gagctcgtcc atctctgcat 15360
ccccagtgca tagcgctggc actaggaggt acttcatatg tatggaagga aagaatgaat 15420
aaacacattc tcaggattca aactgttctg ataggacatg acacccatgg aggtgctccc 15480
catcattgaa gcaaaagggt tgaaagccca ggctctgaag tcagagtgat ctggattcaa 15540
tcccagcgcc accctccact agctgtggac aggttactta gcctctttag gcctcaattc 15600
ctttgcccca aaatagggac agtaatatct acccaggcta gatttaagtg agatgacttc 15660
caaagagggc agagaagagc cttgtcccca tcatgggcag ctagggagtg gcccagtgtg 15720
ggcagtcctt gtccaagccc acccctccct ccaggaagga gggaggacag ccagaagccc 15780
tgagcttccc tccccattct cctccaggcc ctgatcactt cccacaccca tcatttctcc 15840
ccacaaggag aaactgggca cggctgaccc caacgagatg aagttcccca gccagctgct 15900
ccagggcagt gagaagaccc ccagggcagg gccaggaggc agggatgagg gcagagactg 15960
caggatcaag gatcatgggg tgtttggggc cactgggaca tctgggaagg ggccccacag 16020
aggccagtgg agtcccagag cagagggtga gttttctccc tgctacctgc tgagtgaccc 16080
tgcttgagcc cttctggtct ctaagcctcc atttcctcat ctgtaacatg ggaataataa 16140
caggaccaac ctctcagggc tgtcatgggg tttatgaggt gatgctgtga aagtctcgag 16200
tggtagcatg tctggcacac agcagggcct tagccacaca cgcacccaca cacatgcata 16260
cacatatatg tgcagaaaca cacacagggc tggctctgga gccccttccc cctgcccctg 16320
gcacatctgt ggtggtgatg ctctccgctc tcccctcctg tcaatgttcc ctgccagcta 16380
atggaccaat tttttagcat tacggagatt tggccaattt ggcgaccttg acagaaaggc 16440
gcacagagaa ccgttgcctg ggggcggggc gggtgtggaa gccagggtgg gagaggagga 16500
ggaagatggg aaggagaggg gctgtgggct ccaccacctt cggcctgctg ccagcccagc 16560
ccctcctagt ccagacaagg cggggtggag ccactgcaga gatcacaaag ataattagcc 16620
ctacttatgg gcccctcctg tgcacggggc cctgtgctaa gcactttgca tatattttct 16680
cttttaatcc tccaataacc ctatgaagtt ggttctatta tttgctctat ccttcctggt 16740
gtggaaactt agacacagga ggctcggagc ttgcccaagg tcacagagcc aggaagtaag 16800
ggagctggaa tggaagctga ggcttgaagc caggcctctt aaccataact gagctgtttt 16860
taactaaagg ctgaaaatta ggacaggaca ccctccacct atccactcag cccctaccgc 16920
ccacccccac cccacctatc cattcctcca ccccaacaca cacagtctcc aggagcctcg 16980

gctgtgtcac cagcctctca gagctccaag ggcaggggat ccctatcagt gacacatggg 17040
cctcatttcc ttctcgggct gaggatgctg tcacacctca aagacccccа gagccagctc 17100
tttctctgcc gggagagagc cctgggcacc acaattgctg ggcatgggca gggttcccag 17160
ctcctggctg ggctctcctc tcctgcccag gctgtggact gaggtgtcct ggccagctgt 17220
ggctttcagg gcccctcctg gggtcagtgc cagggtggac gtgggtatca gctgtgtcct 17280
ccattaaaca ttcagggccc ttctgggagc aaggaggcag atctgccagg gaatgggggа 17340
ggggtgggag gagggggagg ggagggctgc cacgggcaag gggagggggc tgcggagctc 17400
cgtgcattaa gcgatcagag agcacaatat ttcattgccg gcaatcgcag ccaagacatc 17460
aactacttgg ggagagcagc cttaaaagcc ttttgatttt atttcttcca ctttatttтt 17520
ttttttttcc tttcccttgc tggtgtcctt gacaaggctt cccttccccc tatcctgccc 17580
cttccccaac cccagctgta atgctcctca ggggcccaga aacctggctg gggaggggct 17640
gaggctatgg gctcggcttc tctaaggctg agagggtccc cctggggcct gcagcacccc 17700
cagccagacc caggactgtg tgtgcgcacg cgtgtgtgca ggtgttgctt ggagactcct 17760
gtgcccttgc gtgcatgtat gtgtccctgg gcaccacggc gtgcatatct gaagtatgct 17820
cctgctgaca cacacctgcg tgcgcacagg cccccgtgtg cacacgtgtg tgcatgcttg 17880
ggtgtcaatg ttcacgcgtg tgtgcgtgcg tcctcaccgt gcatgcgccc acagaaaata 17940
ccaccgaagt aagagacgga agagacggga ggttgggggg agtggagggg ggtggtgtag 18000
ggggaggaga ggggggcggg gaggcaagat cagacgacaa agaaagggaa ggcagaggcg 18060
ggggcgggag ggaggtttat ccgtaggagt cagcccagtt gggtcaaact aaggacccag 18120
tgcagacccc gaggcccaga gacacaggtg tgcgcacaaa cacgcactct gcggaaggcc 18180
ggggcgggcc tggccgctgc gggactcctg gcccggcgcc cttgacgtca gcggctgggc 18240
cgtgacgtca cctcaccgcc cccgccgcgc tcccgccccc gcccgcgggc actcagtctc 18300
cgctaatggc aggcgacggg gaatggcaca tctgtcttgc cgggaattag ttcattgaat 18360
caggcggccc gagctgcggc agcgacctta gccctggccc cagggagggg tctgggcggg 18420
cggcgtgggg gaggttcagg ctggagggct gagtgcgggg acgggaggag gggactcacc 18480
tggactcgcg agggggactg agcgctctcc aaatataggt caatgtcccg ctcagcctcc 18540
ctcccccagc accgtgagga ccgaggcctg gggcctggcg cccgcctggt ggacctcggg 18600
ggcaggctgg ggaccgggcc cctgcgggac gcggcgcggc aggacgctcc ccgcgccttt 18660
ctttctgcac ctgcccctcg gggtgggtcc ccctctttac cctcgcttcc cccggcgggt 18720
gccgataaag gcggctaatt cccgagcccg gggagggagg gggcgactgt tccagtcaac 18780
acttccccgc gctcttcccc gaccctccca gagcgttccc gctgctcagg gcgaggagca 18840
gctgcggcca gtttgtccta gcggtttagg aggcagggag gtttcctcca gcctggagct 18900
ctggctcggg ccctcgggcc ccaacacctt cccgctgaga ccgcgggcgt tgtccctggg 18960
tctctctgcc tccatttccc ccacctccat tctggttacc ccttcccccc actctttcct 19020
tcctaaccca tgagagcact ggaaagatgc tagaaagtcg ggcttctaga gccccagccc 19080
tgcctcttgt tcctgcgaga ctgtgggcag gtaatttagc ctctcagccc ctttcatctg 19140
acgctgggaa gtaatgagga gaccccactt ctctgggaag ttcaatgata tgcgtaaagg 19200
gcttagaatt agcagattct ggtagccagt gcgttacggt tttgcactgg ggaggcagag 19260
ctgccgcggg agtgtggctt ctctagaaag atccctgggc acttcagtga tgaaagtacc 19320
acagtgagga ttgtggtgat gcaaagggcg gaagagtctg gtggggctgc caagtgggcc 19380
aggctggggt ccctcgagat ggagtccctt gagataggga ggctcaccca caccagggat 19440
cccaccccaa actcaggctt cgcctccctc tgcttctacc aggttgtgac actgacccac 19500
tgggcttttc acattacttc cacacctttg cttggccctt cccgctttca cccattggca 19560
acttaatttt gaatgcttaa tccatgaaca gtatcatccc catttcacag acaggagaag 19620
gttcaaagag gcagaggttc agagaggtta agtgacttgc caaagacctc acagctatga 19680
catggcatag ctgggatttg aacccagtgc tctggcctca aatgtcaact actctctaat 19740
actctgcctc acctctgaga accacttagt tgctaggaga cagcaagctc gcggttacta 19800
tgggaactgg gctgatgtgg aaagtggaga gttggtgtcc aggcagcaat gagaaggctc 19860
caggtaggtt ccacatccct cccctgtccc ttccatgaag gcagcccttg gcgttcagct 19920
ctgggttcca gatggcacat gtcctgatgg gacctgaggg aggtgcagtg atggtgagtt 19980
acgctggaaa ctgccctggc aagccaagag ccctggtgga ggatgtggtc ccaaagatgg 20040
gtctgagggg cgagacaggc cagagaacct cacgatcctg ctttccggac atttgctgca 20100
gtcacacctg ccctgcagac agtagtgcag agcagagcct ttccttgtga agtaagaaaa 20160
agggaaggca ggaccatgat ggggcacaga cccatgccag agagttctgg acccaggaga 20220
acacctcagt tctctcaact gtaaaatgag gatgatacca gcccctctct catagtgtgc 20280
tgagaaaatt gacaaagata caaagcacta tgtctgacac atagacttca ctgactgtgt 20340
gaccttggac aagtcactta gcctctctga gcctctgtaa aatggggata ttaataggac 20400
ctgctttata gggttgctgt agggattcaa catgtgcgta caggtaaagg tcctcccagg 20460
ctttaaggac tatctacagt gtttgctgtt ctgtttttgt tttgttttgt tttgtttttt 20520
gagacagagt cttgctccgt cgcccaggct ggagtgcagt ggcacaatct cggcttactg 20580
caacctccac cttccaggtt caagtgattc tcatgcctca gccacctgag tagctgaaat 20640
tacaggagcg tgccatcata cccagctaat ttttgtattt tcagtagaga cggggtttca 20700
ccatgttggc caggctggtc tcaaactcag ccacaagtga tccgccagcc ttggccaccc 20760

aaagtgctga gattagaggc atgagccacc atgcccggct ggctgttctg tttgtagagt 20820
agatctcccc agccccagga gtccaggtca ctctgaaccc ccatgctttt ctctcttcct 20880
gtctcaggag aaaagcctcc tcctgccccc aacctttgc caggtgcatg aggaggagct 20940
gaagtgagaa acaggacact ctgaggcccc aggccgcccc tactccaagg cctgaggtcc 21000
ctgtcaggcc acacttcagg gacccggaga ctgggaggct gcggcagcag ggagtgagga 21060
gtgggggcag cgctggcagc tccatttgct cctggccagc ctgtcagtcc cttaatctga 21120
tcccggagga gcagtgcaga ggcttcactc tggatgacaa acgaggaggg gagagtcctg 21180
ctctgcctgg actccgggtg aataatggcc ttgcattaag atattaggtc ggggcgacaa 21240
gaaatgtgcc ctcccttaca tggctgtgaa gagcccagag agggggaggc ttcctgagga 21300
ctgagccccc gggaagggcc gggggagtgg agggatgtcc ggagagggct tgggaagggg 21360
gagggcgggg tgagggacac agagacaggc cacggagatg cccagaaaca gagacaccgc 21420
agggagagaa gaagcagaaa gggagggtga cgggggggaga cagaggctcc ctgagagaca 21480
gaaagaggag caggggtgtc agagggaggc agaggcagag gcccagatga aggtggtggg 21540
gagggaaagg gaagaaggac aaagagacaa acttggcggg aggggagcag ggggagggggg 21600
gaggccctgc gctcacacag ggcaaggatg tctccatcag gggcttcaga ttcccactgg 21660
gggctgtatc cctagccctc cagggagggc caggctggag acagaacttc aaggctggcc 21720
gcttgatgtc cctctacttg atcctgagcc tcctgggtgg ggaaacactg gctggggatg 21780
attgtcctct cagaagtggc tcaggcgaac gttctgggct tccaaccaca ggggcagcac 21840
ccttctgtgg gcagcctgct tctggaggag aggggtcctg gcccccaggg agggggggaca 21900
caggggccag ccagagggtg agccccagct ctgggctcct gcactgttct gcaagcccca 21960
tatcccacag cctgagtcct gagatgcagg gctgcctggg gcagggacct ctggagatga 22020
gccaggccca gagcaaggcg tggggagagc gaagcctgga gagaagaggc tgggagagca 22080
actcaggcag aggggattcc tgacaggctc tgaggggagc ctgcctctct gtcaccacaa 22140
ttcagcctcc ctggacccca caggcccggg tacaaatcct agctccatcc ctttttgttc 22200
tgtgaccagg tgcaggttgt gtgacacacg gtgcctcgct cagtggcccc gcgtgaaaag 22260
ggggatgatt atgattatag cccctcctgc atgcagcttc tgtgggggtc actgagtctg 22320
tacctggagg attcccggag ccaggactgc catgggctaa cggttcagcg aaccccacaa 22380
atcatcattc atcttattat ttctctaggc ccagccatgt ctgtgtaaac aagatgatac 22440
tgaaaacaag tccctgcacc tccttttttct tccattctcc ccagcggctc ttgcccagac 22500
ctgagagtcc tgactcacct tgccaagcca tccacctatc cacatctcaa ttgccgcatc 22560
tgcaaaatgg gtacactgtg aggctccgtg gaagtggtgt gggtaagcac tgaatgaggc 22620
ccacagaagc ctggttcaga tgccctctgc tctgaggacc cctctcctcc agaagcaggc 22680
tgcccaggga agggtgttgc ccctatggtt ggaggcccag cacattcgcc tgagccactt 22740
ctgacaggac agccatcccc agccagtgtc tccccacatg tgcacacaca tgggggaagg 22800
actgggagcc tcccagagtg gagatgctca ggcacagctg tcaggtgagg gagacccccc 22860
aaaaccaggc ctagggcccc atgtacttgg gagtagagga ccccttcccc tgcagcccta 22920
gcccctcctc atcaggaccc ccttcccctg cagtgctagc ccctgccctg ctcagctcac 22980
ggagctgccc gctgcagacg gcccccacct ggtgtcccgc tgtgctgttg cccctgtgaa 23040
ttgcttaata actgttgaac aaggaggctg cggcgttggt agcggaccct gcactgtgct 23100
cacttgggat tgcacacgtg ggcaaagctg cctggtgggc agcttgaaca gagagggggt 23160
gatttggaaa caggaaaggc agctttggag aaggaggggg gcagagtgga aagataatgg 23220
ggagtcagga aaagcagaag gctcacctcc ctgagcccca gaaacctccg aggcagagag 23280
gctgtgtcct gctgggtagg ctgagggagg agggttgggc ttttcatggg gagatgggta 23340
ctggggcatc cacagccact gagattttcc ttcacttgcc ccaagatctc tccctaaatc 23400
tcccggcttg gacccтttgg ttttatctag ctcccagccc ttgtggggtc ctggaatttg 23460
gcccagggct gcccaggact tcctagtcct tcgaggcctg tgactctcac tgagcgccac 23520
caggaggcac ccccacacct gctcacccag gtgggccctg ggaccctcca gcctggcagg 23580
tggggaggag gggcttcctc agggtagagg tggggagggt cttcgggcct caggccttgt 23640
ggctcagaat ccagcagttc agtggttcag cggggaacca gcatgtcccc gcaaggtgat 23700
cgtttatctc tcctgacctc ccagtgcttc ttgccctgac cacagacccc tgccccccaa 23760
ccagctcaca cacacaccca cagccacact gggtgagtga caggtgtccc accagagact 23820
cgcttcccag tgccgctgca cctccatcca cggtcagctt ttctggtcac tccctcagtc 23880
cctaccctcc gagtccttgg ccttagtgtg ggcggagggc caagtctggg gcccggtagg 23940
gccacacctg ctgcacaccc tcttctctct gagcctccat cgcttcctga aggttccatg 24000
gaccaactgt tcctaaacat ggtttgtttg gactcatctg gcactttgat actttgatat 24060
tcattcggca ctgccaggcc acctcaggtt gaggtttatc cctgaaccag ctccctaccc 24120
cagcacctcc agtcatgtgc cctctgccct ccagaaagaa acaaagtccc tgaaatatct 24180
ttacattttt ttttctgtgg ataatacacc catataatta aaaaatcaaa gcaattcaaa 24240
gttccactcc cattcccatg tacctggttt cctcttccac cccataaccc caggggggcta 24300
ctttaattct gtgtgtagtc taaaacaaat tatgtgcttt tctttttgtc ctttctcaca 24360
caaaaagtag aatgttcctc atttgagtac actgttcctc attttgtttt cacttaatct 24420
atcttgacgt tctttccaca gcaatagatt cctcattctt ttttcacagc tgtatagtat 24480
ttcatctctc tctgtcaccc agactagagt gcagtggtac aatcataact cgctgcaact 24540

tcaaattcct gggttcaagt gatacttcag cctcctgagt acgtaggatt acaggtgcat 24600
gccaccatgc ccagcctatt tatttacttt tatttttatt tttgagacag agtcttcctc 24660
tttcacccag gttggagtgc agtggcacaa tcttggctta ctgcaacctc cgcctcccgg 24720
gttcaagcaa ttctggtgcc tccgcctcct gagtagctgg gattacagtc gtgcaccacc 24780
atgcctggct aatttttgta tttttagtag agacggggtt tcaccatgtt ggccaggctg 24840
atctcgaatt cctgacctca agtgatccac ctgcctcagc ctcccaaatt tctgggatta 24900
caggcataag ccaccgcagc cagccaatgc ctagctaatt aaaaaaaaaa attttttttgt 24960
ttttttttgca gatatgggga tctcgccatc ttgcccaggc tggtctcaaa actcctggcc 25020
ccaagcagtt cccacctcag cctcccaaaa tgctgggatg acgggcatga gtcatcattc 25080
ccagtctcgt acacggttta ttcaactgag tccttcctcc atcactacct gagttgttgc 25140
tacttttctt ttttgctctt tctgtcaatg ttgcagtgaa catctttgta catctgtcat 25200
tttataactg tgtttttata catatctgta ggacaaaatg ctctgaagtg ggagtactaa 25260
agaataagaa tgcgtgagac caggtgcgat ggcatgacac tttgggaggc cgaggcatga 25320
ggattcttga gctcaggagt tcaagaccag cctgggcaac acagctagac ctcttctcta 25380
taaaaaattt taaaacttag ctggatatgg tggcaaacgc ctgtggtccc agctactcag 25440
gaggctgagg aaggaggatc acttgagccc aggaggtcaa ggctacagtg agccgtggcc 25500
acgctattgc actccagcct aggtgacaga atgaggccct gtctcattta agagaaaata 25560
aaaattaaaa ggagaataag agtgtgtgta ctgtgggtag gtatttgtgt aggcattgtc 25620
aactctcact gtgactctcc taaaagcaat gaatgagact gtttctcaac agactcacca 25680
aaatcaaact attggatttt tgccataaat tcacttgtgt tcagtgccct ctcccccagg 25740
aagcctgccc tgacctccag agtgtaagca agcccccttcc cctgtcccca gcactcaagg 25800
cttctcctac acagcgccgt gtgcatttga gatgacttac atagtcctta ctttttttt 25860
tggtggtttt tttttttttg agacagagtc ttgctctgtc acccaggctg gagtgcagtg 25920
gtgcaatctt gactcactgc aagctccgcc tcccgggttc acgccattct cctgcctcag 25980
cctcccgagt agcctggcta aatgttttgt atttttagta gaaatggggt ttcgccatgt 26040
tagccaggat ggtctcgatc tcctgacctc gtgatccacc cgcctcagcc tcccaaagtg 26100
ctggaattac aggcgtgagc caccacaccc ggccagtcct tgctattatt acttctttac 26160
catttgtcta ccaccaggct attagctcca tgagggcagg gactgtgccc cagttctcag 26220
tgcagcatgg gcatgtcata gatgctgagc acacctttgt catctgggac agccccctgt 26280
gtgcccagca ccctagcagc tgctttggct gggtggcctg agctgagccc ctcaacaacc 26340
ttctgaggga ggccctggta ttagctccat tgagcagatg gggagatgga ggctcagaga 26400
caggaggtag tttgctcaag gactcacagc tggccagctg ggaagtcctt acccctcacc 26460
cccacccctc ttgccaacat cctggcttga tttcttccct gctctggtcc gtggggtccc 26520
cagtccccag gaggcgtggt ccggcccagg tcacagtagc aagcccagga tcggcccctc 26580
cacaccacct gcagtgatgc agagccaagc tgggggccag cctgagtccc caggggcctt 26640
gtcagcctgc gcggtcaggt cccctgtgca gtggcagtgg cagggaccac agtgaccctg 26700
gtagccatac agttgctaca gccctttccc ggaggccccg tggctgtgct ggctttgtgc 26760
ccaactgtca ctctgtcccc agtggctcct catgctggct gcctgcctcc ctgcctccca 26820
ttaatcatgt gtgtgggatt tattttctcc agcaatttat ttcagcaaat gcaatctggg 26880
tgtgcccgca ggtgggcagg atgctccgtt gctgccagag tcacagagcc cagctttatt 26940
gtcaggctga caggcatgat tccccagcga gcacccccac cgcagatgcc aggtctagcc 27000
aagccctggg gcaggatgct aaggacccct gggactgttg ccacccccac atcactgtga 27060
acctcaaagt cccataggcc tgggagccca gcttgcccca ctctctttat tggttttgct 27120
gcccctacca atgctagctg gctaaagggg tgtaggggaa gattagccct cctgtccttg 27180
gcctaaaacg ggcagccaga ggtctcttcc gaagatccag gtggtggctc ttttcagttt 27240
cctgacctgg ggaaggagga ggtccttcct ctggagcccc ctcctcccca gaactgctgg 27300
gcagcccaga cctgattccc atgacagtca cggagggaaa caatcagcta aggcaaaccc 27360
tgccaccccc tcaccacccc cgcaacacgc atcctccttt cgggggctcc ctttcattcc 27420
ttaatcaccc catgcccctc tctctaggcc accaagtgtg gcctccctgg ggctagggaa 27480
aaggacgtgg ctttcaggcc aggacaggag caagtggctg ctcagctatg atttcaggtc 27540
ctgagacacc gctgctccca gttatctgcc cacttacagg ccttggaagt cgaaagggaa 27600
agagctgtgg gcaggggtgg gcagggaccc tccacttggt ctggccctca ccaagccctt 27660
tgcagcctgc acccactccc cccagccctg cagtgtttcc aggggcccag accctagcct 27720
gcgggcacct gcttcctctc ttagtatccc ccaggttcat cctgaggccc caccccccagc 27780
ttgccctgcc tggccaggct gcctctaatg ctgcagataa tttctgctgt cgcaaagcca 27840
ttaccctgca aatgggctga ctccagcatg tgtgcgtgtg tatgtgtgtg tgtgtgtgtg 27900
ttcccgtgtg tgtgcatgcg cacgtgtgtg caggggaggg ttggctgcgg caggcaaagc 27960
gccttgttta tgcctcgctc atcactgtaa ttgccttggg ggatttattg gctttgtaag 28020
ctctccctgc accctacatg gcctccacct ggccctgagt gatgaggctg ggagctctgg 28080
gcaggggget ggacatgccc agcaggaggg taagtgaggc cttgcggagg gccccctgac 28140
ctatgcaccc acccctttcct gctccatgcc tggtagctgg acatagaagg agatagtagc 28200
tggggcaccc ccacgaggcc tctccaacct cagaggctct gaggaggttg ccagtctggg 28260
ggtgcaagat ggatgcagaa gggacactgg aggaactttg gtggcacccg tgtctctggt 28320

ttctcctctt cctctcccct ttaggtccct cccatcatct gctggcccca accccacgcc 28380
tatatgtctt ctcagctgtt ctgcctcacc cactcctgcc tcacacagct gagtcccctg 28440
caagggaaga caaagcctcg gccccaaccg tttcatccat ttcaagaagc ttcaaccttt 28500
gtgtggctac cttagcaaac ccctgcaggg ttagcagtca gaaggcactt gtggactccc 28560
aaggcagggc tgggcagagg ttgagggtgt ggcctctggc agcaggcaga acagccttcc 28620
atctcttctc cagttcctag cagtgtggtc tcagctaggt caatcaactt ctccgagcct 28680
cagtggcctc atctgtaaaa tgggtctgat gacacctgcc ttaagcagtt attatgaagg 28740
tttgatacat tgtaatacat cgaactacat gaaattccct ttactcaacc agcttttgac 28800
attaatgagt atttactcgg tgaaatatta tatcaataaa ctgtcttatt gaaaagattt 28860
ctacttggtg cctgtccttt tctttttac tcttgatgtt tcgtatttgt ataaatgcta 28920
cctgctgatt ttaaagaatt caagtaacac aggaaagcac acagaagaaa gtgaaaagca 28980
aaacacaata aaataaacct caatttcaga aattaagcca tcattaataa ataaccacca 29040
tttccagaaa tttcttttta cattgatgca gataagttta gagagataga ttgctagaaa 29100
tttgctgtaa ggagggatcc tattgaaaat tttaatatga cttattaaat ctaatttgag 29160
tttatgttgg cagcagtaaa tgaagcaacc atgaagagaa ccacatgact ccaagaacca 29220
tctctacatc agagagatgg tgttttctaa aaagatcatc taaggctggg cgcggtggct 29280
catgcctgta atcccagcac tttgggtggc cgaggcgggt ggatcacttg aggtcaggaa 29340
tttgagacca gcctggccaa catggtgaaa ccccatctct actaaaaata caaaataagc 29400
cgggcatggt agcacacacc catgctacac aggagcccca gctactcagg aggctgaggc 29460
acgagaatcg cttgaacctg ggaggcagag tttgcagtga gcccagatca tgccaccgca 29520
ctccagcctg ggtgacaagg gcaaaactcc atctcaaaaa aaaaatcatc taagttaaca 29580
aaaagatttg aaagcaatag caatgggaaa tactgatcag ggagagtcta ctatgtagga 29640
ggaggggaaa atgggaatag tagcatagaa attgaaggtg ttaaattagc aaatttcaaa 29700
gaaacacagc cgtcagccag actgaaaaaa aggaaaggaa acttatggag atcacaagaa 29760
aaaagacaaa agacaaaaaa gaagaacagg agaggaaaca agcaaaattg tgaaatggtt 29820
tgcattcttt tatcacagga ttgaacagtg gtcttcagtg gcatcagtgg tggtctggat 29880
gtatccgtgc ccaaaatatt gagtgagggg agggcgggga ggccaggggt ctcacctact 29940
aaggaaagcc ctggatacag ttccaggatc actccattct cagagaacca cagagcctgc 30000
aggcgcccca gcttcagcag tgctcccttc tgggctagac agcacccctg cctcttcaga 30060
gccctcttaa agtcaaatac aggccaggca tggtggctca tgcctgtaat tccaacactt 30120
tgggaggctg aagcaggagg attacttgaa cctagaagtt caagaccagc gtgggcaata 30180
tagcaacaag ttgtctcaaa aaaaaaaaaa aaaaaaagcc aagttcagcc catggggaat 30240
agggaaggtc agaacagaaa gcaaagctga aaagctgaaa gggacaggca atccatgagg 30300
aaggccccat ggggagaagc gagctcctac tcagacaaac tagggcccag gccacacaca 30360
acctggggag ccgccgcccc ttctgcagtt tcacatccca tcctgtctca ttctctgctc 30420
tcccacagct cccttgctgt ctcccaagct caggccctcc ctgccctctc tatattcatg 30480
cagggaaaca gcacttatcg attccgtcac atttacaaag agctgatcta gagcaacgac 30540
cacagtccct ggcagccctt tgcaggaggc ctaactgtgt cagctccttg aatccccacc 30600
aacaagatgg gggttactag cctatttccc agatgaggac atgaggttga gagaggagaa 30660
gtatatttgt ttccgagggc tgctgttaca agttaccaca aactgggtgg cttcagacga 30720
cagaaattta ttctttcaca gttctggagg cgagaagtct gaaaacacgg tgtcagtgga 30780
gccctgctct cttgaagcct ctccaggaga acctgttcca tgcccttctc atagctccgg 30840
ttattgctag ctgtccttgg cattccccag cttgaattgc atccctccag cctccgcctc 30900
tcttgtcaca tgacattcac ttgtgtgtct ctgtctctgt gtcttcttgt aaggacacca 30960
gcctattgga tgaagggccc ggtgtgacct cattattaac taactacaac tgcagcaacc 31020
ttatttctga ataaggtcat agtctgaagt actggttgaa cttccacatg tctttttagg 31080
gacacgattc cgcccataac aggaagagat tcacccaaag tcacatggag gtgcaattga 31140
atctccatgc caagctctga atcatggtct caggccaaga agaccttacc tcaacctccc 31200
ctcacaactt catggggcag ccgcactgta gtcagcaaag ctggcctagc tgcaggtccc 31260
accctcccat ctagggacac ggccccaaag gcagcctgct cagctgctgc tcccactctg 31320
cctctttttc ttttctttt ttcttgagac agtgtcttgc tctgtctccc aagttgcagt 31380
gcagtggcgc attcttggct cactgcaacc tctacctccc aggctcaagt gatcctccca 31440
cctcagcctc cctgagtagc tgggaccaca ggtgcacgtg aacttgccca gctaatgttt 31500
gtatttttc ttttttttt ttttttgtaa agacggggtt tcaccatgtg gcccaggttc 31560
ctactgtgct tttgtccact tcattggaga ggcctaggag gtcaggggag tttgggaagg 31620
agggaaggac aagcacctcc atgacatggg gggtcttcag gagcttggaa gaggaaggcc 31680
ctttcccaaa ggacaactgc agagatgctg catcataggt gggtgccctt ccaggtgccg 31740
gctgtctcct ttccatttcc agaggcccag cccttcccac attcattcct tcgtctgaga 31800
aggctgcagg actgactcat atcacctaag cccactggaa cctcctgaca ggagcctgct 31860
ggggttttcc agagataaca gtgacaaggt ccaaagttct ttccctgtct cttcttgaaa 31920
tgggaaggtt gagaccaagg cttgcctctg cctgtggaag gatggagatg gagcatctgt 31980
gacctcggag gacacccagg tgtggagaga gggcctgcaa gtgacagacc aagacctctc 32040
tcctcccagg gaagagatat ggaagcctgg agtggaggca gtgagggagg aagaggagaa 32100

ctaggggctt tcctggtcat ctttgcatcc ttcctgcagc ctggactgtc accaggcccc 32160
acccaaaagg agaagaaaga gggagagcct gggacagcag gggtgggggt gagctctgca 32220
cctgtctgag ccacattctc tccctgtatc tggaaatagc tgccttaaat tcccctcaga 32280
aagcattgct tctctttgcc tgacacaaac tcgagagaag aggaactgct gggcctgcca 32340
gaggcgggca actgggactg aataggctag gtgtggctgt gagagcaagg gcagcagagc 32400
atggacaggg agctggcagg ggaggggaga ccccagcact gctttgggca ggttgagatt 32460
gaagtgccag gaggcaagag atgcagccct ggagcagagg aggggccagt gctgatcttt 32520
ttttttttt ttttttttt tgagatggag tcttgccctg tcgcccaggc tggagtgcag 32580
tagtgcgatc tcggctcact gcaacctcca cctcctgggt tcaagcaatc tcatgcctca 32640
gcctcccaag tagctggggt tataggcgcc caccaccacg ccagctaatt tttgtatttt 32700
tagtagagat ggggtttcac catgttggcc aggctggtct caaactcctg atgtcaaatg 32760
atctgcctgc ctcggcctcc cagagtgctg ggattacagg catggccacc gcatctggcc 32820
gtcagggctg atcgttcatt catttagcgc atgtgtgagt cggactctgg tctagatgct 32880
gggacagcac ggagccggac agacaaaccc tgcaccctgt catccagctg ggcaccgaaa 32940
tgcgagcctc tccctcttac cagcttcctt gattcctgat caaggaattc aaattccatg 33000
attcctcctg ggacctcatc tgtcctttcc agcttggctg gggaagtgag ggaagctgct 33060
gtgctgtgcc aaggcccccc tcccctgtcc tgttttccta ttcactcggg gaagggtcca 33120
tagaggatgg catggatttc ggcaggtccc tggcattgag ctgctcgctg ggaggaggtc 33180
tggggccaac tgctggtacc cttttaacta gactatagga gactgagccc cttataacag 33240
ccaagaatcc ccatcaacat cctgcaacat aggaataaat actctaaaga aaatacaaag 33300
tccgaggcca ggtgcagtgg ctcatgcctg taatcccagc actttgggag gctgaggtgg 33360
gcagatcact tgagccctgg agttccagac cagcccgggc aacataggga gaccctgtct 33420
ctacaaaaaa tttaaaaatt agccggcatg gtggtgtatg cctgtggtcc cagccactca 33480
ggaggctgag gcaggaggat cacttgagcc caggaagtcg aagctgcagt gagccgtaac 33540
ttgtgccact gcactccagc ctgggtgaca gagtgagacc ctgcctcaaa tataaagaaa 33600
gaaagaaaga aaaataaaga aaatagaaga cggttgtgtt acagagaatg agactgcagg 33660
gatagaggcc tggaagtctc tccatcacat tccaatggag gaagcagaca gggagtgagt 33720
gcacgcttaa acaataataa acaaagtaat gttatgaggt gggattttaa tgtggcttct 33780
aagaggtaac ttgtgcgagc ggatgaaatt gagccagact tggttgggtg ggtccataca 33840
gaagagagga gagggctcgg gacccagctg tgggcacagg aatcagagaa caggagaatg 33900
gggttaagca gaattgcagt ccacgcagaa agttccctcc attttctttg gcagtggctg 33960
gattctcacc ctgcctccca cctgaagacc agaggcagga gggaggccca ggggctctgt 34020
gtgggcttgc tgtggcctgg cctgcgtgac tcggcaagaa tgggcaggac ataccttcct 34080
ggagggatgc cctaggggaa gcgtccatag agctgcctgg gtggctggct ccatccctat 34140
cccctcagct tggatgcagt aacctgcagg gcagaagctc tgttgaagct ctgtcgaatc 34200
ctcacagagg cctgtgagga tttcccaccc accttctctg ctcctgggtc ccctgctttg 34260
gtggctctta ctgggaaccg caggcgatct tcctttggac actgtctctg tttatgctaa 34320
aattcaagct gtgttgagct aatgccttat ctaccaagat tgtggaggtc atggataaaa 34380
agataccctg caagatggac agatactctg gtgaatagag tcctttccaa cttcaccaaa 34440
ttcactcacc agaatcatcc gcagacagta ttttcagagc attcctgaag tagaggtatt 34500
gtcatggtga ggtgcggtgg taactgggga aagggatcct tagcatggtg tgctggtcac 34560
tgtggaacag ctggctctcc agggggaaag agccccgggt catagcattt gctgataaat 34620
attcccacca gttcacctca catgaattgg ggagcctggg cagcgcagac gggcactatc 34680
ctaccccagg tggtaactca gtcccaggag agctgtgtgg ccctgcccat gagactccag 34740
aggactccag aagaatccca ctgccagatc agggtcacag aacaatgccg gacaggcaga 34800
gcgggcactg tgcagggcca gggggtctgg gagagcgtca gaagctgcta gggcctgtcc 34860
tcccggaact gggccactgt gggcctttca tctcccgcct ccctttccgc gccactcctg 34920
cggctgcctg cctctgcccc ttcccacccc accacccccа gtgcggcaat tacggcgcta 34980
attaggctgc tttgatcatc tttagaaatg gccacattgg ggagggactc tgccaagcaa 35040
ttaggggcag aggggtgggg agctccaggg cttcctcagg gggtggggct gctgagaaac 35100
cccagacacc ccctgccctc ctccctccag gagtgtctgc cccgtcatag ctgtaagctc 35160
ctcagggggt agaggcagat ggggatcccc ccccatccca gccctggagc cagggcccgc 35220
ccccacccag cagccccccт ctgcctggcc tgcagcccaa ccgtcagccc ttcttccctg 35280
tcttggcccc tttgatggag ccgcagaaac aagggctcct ttgacagaag gggggctcgg 35340
agctgggatg atgagacttc agaggtgaag gtcaagccca ctaccccact cctcccccaa 35400
tcttggccac cctcccgtgc acccctcccc caggctgtcc tctataaaga ccctgcagcc 35460
ccattccccт gtgggctcct aggagttaag ggccaggtga gggctgacca gggaggcggg 35520
taattttgat gtaagagaac ggggtcagat gatttgaggg acaagaattc agtgcctggg 35580
ggccgaaagg cagcagaagg cgggcaccaa aggataggca cccggaaggt ggactccgag 35640
gaggagagag gacaggggtc tctcacccca gctcctggtc accatgctgc tggctatgct 35700
gatgctgcta cccctcccaa gctcatggtt tgcccacggg cacccactgt acacacgcct 35760
gcccccagc accctgcaag gtaagtccag gctggcccga gagccgcggg gttgggagga 35820
atgtagagga agtgggaccc tgggcgggcg gggacagaag agcttgtcac ccccactcat 35880

aaggaccttt ggctccttct gcccaccctg ctgcgagaag gggccaagaa ctgagatata 35940
ggtgggagag gaggggtgtg gcgggaaagg gaaggggagc tgttgagcat gccgaaagga 36000
atggagagaa ggccccaaga agcagagaga aacggcccgg ggcagcaccc tgcccttggc 36060
tgtcccggcc gaaggtgggc cactcaaaca cagctacttt cagtcaataa agctgagttc 36120
tgcgatgtct gtatctttgg ggtggtgtct ttaaaaaaaa ttgttaagga aaagcacctt 36180
tcaaagatcc cagtccagct cagttgaatt agggagacat cttgggctga gaacctggga 36240
gcacgggctc tgagtgctgg gcccagcgtc cccggggctc acttgcctcc tcattctgtc 36300
ccaggctggt gggtctcccg aggcagggct cagggctggg gccaggagga tgaggctgag 36360
gctcttcccc aaccacgcat gattgtgtgc cccctgtccc agcagttctg tcggcccagg 36420
ggactcaggc gttgcaggca gcccagagga gcgcccagtg ggcaataaac cgagtggcga 36480
tggagatcca gcacagatcg cacgagtgcc gaggtgccca ccctgccccc cgtgccccag 36540
tgagcttgct gcctaccctg ggcccattct gctgcctctg tcccttccct tcagtcttca 36600
ctcccctctt gggggcagag actgtgttgg gccgcaacct agactacgtt tgtgaaggtc 36660
tgtctctccg agtggaaagg acacgctagg cttggggcat ggtctgtgca aaggcaggga 36720
ggcggaaaca ctctgggctc ctgtggtgac caggagaagt tcatggttgc tgaaatagaa 36780
cccgtgtggg ctggagggct gagcgcgaaa ggagagatgg ggagagagag gctcggccca 36840
gcctggggtg aggacaggcg aaagggcagc agtgagactc aaaggtctgt ttctctgcag 36900
gatctgggcg ccccaggcct caagctctcc tccaggaccc acctgagcca ggtgaggctg 36960
aaaaggctcg agggggcagg cctgagagcc gggtgggcct cgaaggcgag gatggccaga 37020
acatgtccct cgtgacaccc cttgcccctt tctagggccg tgcggcgaga ggcgtccgag 37080
cactgccaat gtgacgcggg cccacggccg catcgtgggg ggcagcgcgg cgccgcccgg 37140
ggcctggccc tggctggtga ggctgcagct cggcgggcag cctctgtgcg gcggcgtcct 37200
ggtagcggcc tcctgggtgc tcacggcagc gcactgcttt gtagggtaag taggaccccc 37260
aggccttgcc cagctggggt ccccggcgct gggccccgca cctgccgggt tgtccggcgg 37320
gcgacgcgcg ggaaaggtgg tctttgctgc cccctggcgg cggccggccc cgggcttccc 37380
cgtctcaagg cgccgcgccc gccccgccag gatgccagcc cggaggggggt ggcacggccg 37440
ggcgagttcg ccccctctgg gacgggaccc ctccccggcc cgccctccgt gcccccaggt 37500
ggagaaagcc cggcatgcgg gcggaggggc agggtttccg aggggcctgc ggggtgtgcc 37560
cctgtccttc ctgcgtctca gctgccgctc gacccgcagc gccccgaatg agcttctgtg 37620
gactgtgacg ctggcagagg ggtcccgggg ggagcaagcg gaggaggtgc cagtgaaccg 37680
catcctgccc caccccaagg tgagaaggca gtccccaggc ccccaaggct gggcaccgca 37740
cccccacccg tgcttccttg accctgcgcc gcctcccgct cctcagtttg acccgcggac 37800
cttccacaac gacctggccc tggtgcagct gtggacgccg gtgagcccgg ggggatcggc 37860
gcgccccgtg tgcctgcccc aggagcccca ggagcccgct gccggaaccg cctgcgccat 37920
cgcgggctgg ggcgccctct tcgaaggtac tgggcgtggg tgagccggcg cgtggtggga 37980
agaactgggg gtccgaggta atagagtgtg gggaggccgg gttgccttgg aaaaatgctg 38040
cctgctcttt caaaggggga ggaatcaagg ggggtggtgg gaaggggacc ctcaaggcgg 38100
ggctcttgcc ctccaaacct gagccttcca ccccttccct gcagacgggc ctgaggctga 38160
agcagtgaga gaggcccgtg ttcccctgct cagcaccgac acctgccgaa gagccctggg 38220
gcccgggctg cgccccagca ccatgctctg cgccgggtac ctggcggggg gcgttgactc 38280
gtgccaggta tgaacccagt ctgatgagaa aaggccggct gagccttccc agggccacta 38340
cggcctcttt tccttccacg tctgtctgtc actcgacttc tctgagcctc tctgtcctca 38400
tccctaaaat ggacacaagt ggcaagctca cacctgccag gcgtaaggca ggcgtcatag 38460
ggggcaggtg aatgcagcgt cctctctctt ggccccgcag ggtgactcgg gaggcccccc 38520
gacctgttct gagcctggcc cccgccctag agaggtcctg ttcggagtca cctcctgggg 38580
ggacggctgc ggggagccag ggaagcccgg ggtctacacc cgcgtggcag tgttcaagga 38640
ctggctccag gagcagatga gcggtgagcg ccctctttcc aatgccccgt ccccagtgcc 38700
ccaacggaca accgtgggac aagcccgttt ccacccggcc catgcccatt cccagctccc 38760
ttctgcctcg ggaaagcctg tctccttccg gggaaggagt gaggggggcta gggccccaaa 38820
cagagggtga gctgacccct gtcccgcccg cagcagcctc ctccagccgc gagcccagct 38880
gcagggagct tctggcctgg gacccccccc aggagctgca ggcagacgcc gcccggctct 38940
gcgccttcta tgcccgcctg tgcccggggt cccagggcgc ctgtgcgcgc ctggcgcacc 39000
agcagtgcct gcagcgccgg cggcgatgcg gtcagttctg ttcacccgga cccggacggg 39060
gggcagaggg gaggggggcct ggccagcctc tgaccgccgc tccgactcct gtccggtccg 39120
cagagctgcg ctcgctggcg cacacgctgc tgggcctgct gcggaacgcg caggagctgc 39180
tcgggccgcg tccgggaatg cggcgcctgg cccccgccct ggctctcccc gctccagcgc 39240
tcagggagtc tcctctgcac cccgcccggg agctgcggct tcactcaggt accccgcgcc 39300
ctccagccca gcccagccct ggcccggccc cacccgcgcg gcacagccac tttctccgcc 39360
gaggcggtac cctaaccctg tgcctcccca ggatcgcggg ctgcaggcac tcggttcccg 39420
aagcggaggc cggagccgcg cggagaagcc aacggtaatg acgccccctg ccgaccttca 39480
ggaggggata ggctgagggc ctggacgagg tcggaagcgc ttctactgca gctccggaaa 39540
gggcttaccc catggggcaa cagggtggac tcgttctccc ctccccgcca tagagcgtat 39600
gactcttttg gagtacttgt ggttttagct ctcatcagtg tcaaacagag atgctttgcc 39660

```
tggtgttact gcttaacttc tccgagcctc agtttcccca tctatagcat aagaggataa 39720
gtgtgtcccc tgggaggcca tcctgaggtg ctggtgggag tgccaccccc agttccatac 39780
cgcaaccgtt cattattccc ggggcctctc ctcttcctcc aggctgccct gggctggagc 39840
ccctgcgaca gaagttggct gccctgcagg gggcccatgc ctggatcctg caggtcccct 39900
cggagcacct ggccatgaac tttcatgagg taggtcccca ggcttccaga ctccttcacg 39960
atggcctggg aaggctgaga cccagcccag ggaagatgca gagggcccag cccagatacc 40020
ctcccagcag cctggggtcg cctctgcccc agctctgggg gtaggtagag ggtccgaggg 40080
gaagggagtg gggcctgcgg agtgtgagcc aggccactgg gggtggtggt ggggagagtg 40140
agtagagggg tgggtgggag tgtccacatg agcgggaaat gagcagggtt tccaggtcta 40200
ggtgagagtt tctggggccc agggggagag ggggtgacct ctggggtttc aactcaggag 40260
tgagtttctg ggcccctgat ccccactcct ccgtctgtag gtcctggcag atctgggctc 40320
caagacactg accgggcttt tcagagcctg ggtgcgggca ggcttggggg gccggcatgt 40380
ggccttcagc ggcctggtgg gcctggagcc ggccacactg gctcgcagcc tcccccggct 40440
gctggtgcag gccctgcagg cttccgcgtg gctgccctgg cagaagggga gcccgaggga 40500
ccctggatgg atgtagggca ggggcccggg ctggagagga aggggcacca cccactcaac 40560
cctcaggtac cccccgccag gcaaccctga gccatgtttg ggcccccagc ccctggggag 40620
gacctactgc tcccaggggc tgagaggggt tcgggagcat aatgacaaac tgtcgctgcc 40680
ccagtggctg ggtgtgtgtg ggtgggatgg ggtgggggtc ctgggccccc cgtgtcttcc 40740
caggtttaca atcagagaat cacagctgct ttaataaatg ttatttataa tacacggaaa 40800
caactctgga gctttcttgg gatgggacct ggtgggtgga cattcagtct caggggtggg 40860
gcccaggcag ggctgcctct ggaagcagtt ggcaagggta acagatgatg gaaaggggct 40920
gtaaggcccc tatctgagcc tatctcctgc ctcctgagaa gcagcagcag atggcctgcc 40980
tgttgccccg cccccgtgca tggctgccca gcgctggccc cagtgcccag cgtctccgcc 41040
cagcaccccc ccggccctcc ctccccaccc cccgcctccg agctgcgggg agtcccagcc 41100
tgggatcttt gcctcatgtc cttgggctcc tgccctggct ggcccgtccc ccaccgccat 41160
gaggtgtcag attgtgtttc cggctgcctc ttcccgttga ccccctcctc ccccaacacc 41220
tgtcccctct cccgcccacc ctcattccac agccctgtag acaggagggg cagatgcacg 41280
tcccagtcag agggatggga tggaggggcc ggtgctgaca ctggggctgc tggctgccct 41340
ggcggtgtgt ggtaagggaa gacaccctcc ccaccctggg gtcccccgtg atgcttaccc 41400
aggccccaca ccgcatggct cctcactcac tccactccca ctctgccatc tctccctgtg 41460
gggggccgcc ttctggggtc cccactccca gggagtggtt gggttccccc ctgctcatcc 41520
caacctcatg gtccagcagg acctcagggc agcttccttc ctgagtcccc tgcccagggc 41580
cccattcagt ccttgtcgct gaccctcccc aggcagctgg gggctgaacg aggaggagcg 41640
gctgatccgg cacctgtttc aagagaaggg ctacaacaag gagctccggc ccgtggcaca 41700
caaagaggag agtgtggacg ttgccctggc cctcacactc tccaacctca tctccctggt 41760
gagaggccct ccggtgctgg gttgggaggg agggcaggga tggctttcca gtaccaggat 41820
agccatggag gaagctagaa gcccccacct ggcctatggc cactcccttc ctgggaaacg 41880
tgctgcggct gctctgtgcc ctgagaggct gctgtcctgc ccctccagtg tcagctctgc 41940
ggtgtccccc aaccacaccc atagcatgcc ccatctgtga cacacttcag aggccactgg 42000
tcctctctgc tccctggcgg cctacccact cctgactgcg agtgatcagg gcccagatgc 42060
cacggtttcc ctgggtgcca attgacagtg ggtgaatgta ggctgggtgt ggtggctcat 42120
gcctgtaatc ccagcacttt gggaggccca ggtgggtgga tcacctgagg tcaggagctc 42180
gagaccagcc tggccaacat agtaaaacct gatctctact aaaaatacaa aaattagccg 42240
ggtgtgatgg tgtgggccta taatcccagc tactaggaag gctgaggcag gagaatcgct 42300
tgaacccagg aggcagaggt tgcaggttgc agtgagccaa gctcgtgcca ctgcactcca 42360
tcctgggcaa ttgagcaaga ccctggaaaa aaaaagagag agagagagag agagagagtg 42420
ggtgaatgtg tgcggataaa agaatgatat ggccctgaag gatggcccta ccgtctaatt 42480
acagaaagaa gttgaggaga ccctcactac caatgtgtgg atagagcacg taagaatgcc 42540
cctcccagcc gggcgcagtg gctcatgcct gtaatcccag cactttggaa ggccgagggg 42600
ggtggatcac gaggtcagga gatcaagacc atcttggctg acacggtgaa accccgtctc 42660
tactaaaaat acaaaaaatt agcttggtgt ggtggtgggt acctgtagtc ccagctactc 42720
gggaagctga ggcaggagaa tggtgtgaac gcaggaggcg gagcttgcag tgagccgaga 42780
ttgcgccact gcactccagc ctgggcgaca gaacaagact ccatctcaaa aaaaagagaa 42840
tgccccgccc agagccggtg gggtcgggga gggaatgcag ggcaccagat tgcttctgca 42900
tggagatccc gtctgccttg gacactgttc tccaggaggg gttggtgcct ccctacaggg 42960
aagccccagg cccaactgtc cttcccccac ctagtgccct caccagccct gatgtcacct 43020
tcaagtggat taggattcac atgttggaaa attgccactt tatcttgatg tttattagaa 43080
aacattctct tcctgcctgt caaaagtcca cagtacagac acaaatcgtc tatgctcaca 43140
gtagaaataa tgctccctta gttgtgcagt gagcatcctg cacagctgtc catgacagac 43200
ctgaatccgc actctgtacc tgccttcccc aaacctcttt tgtcacagct ctcagaccct 43260
gttcagtctt ctctcaggga agtgggggga gccaggagcc tggatggctg cagagtgcac 43320
tggtgacatg cctttgggat tccagggctg gacagacaac cggctgaagt ggaatgctga 43380
agaatttgga aacatcagtg tcctgcgcct ccccccggac atggtgtggc tcccagagat 43440
```

```
tgtgctggag aacaagttga gccaagccct ccctgacctc ccctctgtca ccctgcctcc 43500
tttccttaag cctcctctgc ctcccccaac tctgccagtc gtgagtggcc aaagctcact 43560
atggttcttg tccctgtccc ccagcaatga cggctccttc cagatctcct actcctgcaa 43620
cgtgcttgtc taccactacg gcttcgtgta ctggctgcca cctgccatct tccgctcctc 43680
ctgccccatc tctgtcacct atttcccctt cgactggcag aactgctccc tcaagttcag 43740
gtgtgccctt ttctccagcc acccctcacc ccaaagcacc ctgccagagg ccaaagaagg 43800
tgactgaagc accctcagac agaggccccc gccctgtctg gattagtgct gccctcccca 43860
caatggtcct cccttaccag cccttcccca ctctgtggcc ccagccactg gccgagtgtc 43920
actctctgcc cattgccctc cccagttccc tcaagtatac ggccaaagag atcaccctga 43980
gcctgaaaca ggatgccaag gagaaccgca cctaccccgt ggagtggatc atcattgatc 44040
ctgaaggctt cacaggtgct gggaacagcc gccagtgggt gggcaggtcc ctcagacaca 44100
cacagacaca ctggccctgt ccaccccaga gacacacacg tgcacacaca cacacactta 44160
ggacaccaat acacagctcc tcacacacgc agctagacac agaagggcag acacatatcc 44220
gcccacagag gagcacacag acactcacac ttcctgaatg caaagctatc ccaaaggcag 44280
agagagaagg tgccagggcc ctccccatgc ctctgcccag gcccggaagt catgcttctc 44340
ccacatgaga tgcctgtggc tgacaggggt ttagtctttc ctgtgcctgg tgagcccagg 44400
ggtgtggttg gcatgagggc tgtgttatcc tgatgggggt gtctgccacc cctcctgaca 44460
tcctcatccc cgatctgtac ccaggctcgg atcctccatg gggcctacca cttgccctgt 44520
ccatcagaag ggaccctgtc tcactgtctc aggctggcac atcatggcag ggatagtttt 44580
actgtcactg gctcattatc cccaaggccc aggccgagga gtggctcaat taatgtccag 44640
gaggcttttc tttgttactc aggaagacag gctcaatgtc tgagagcatt tgtttgactt 44700
ggtgtcttaa tctgcaatac ctgtttttgg ctcgtgtatc ttttgagcca aaagatactc 44760
cttatttgag tcctgtatgg cctcagcttc tatttttttcc gaaaagataa aaaagaaatc 44820
agtcacagag gaagatttcc cctcacagat ggaaacttcc atcccgaccc cccagggaac 44880
gacacccacc aacgggaccc cgtagacagc ccatctgcgt ctctggactg gcttgccctg 44940
cccagcccct cattctgtcc ccaggccctg cctagccccc ttggcctggc ctgaccctaa 45000
gatgtccatg tgccgccctc agagaacggg gagtgggaga tagtccaccg gccggccagg 45060
gtcaacgtgg accccagagc ccctctggac agccccagcc gccaggacat caccttctac 45120
ctcatcatcc gccgcaagcc cctcttctac atcatcaaca tcctggtgcc ctgcgtgctc 45180
atctccttca tggtcaacct ggtcttctac ctaccggctg acagtgagcc tccaggcccc 45240
gtcccctgct ccccctcccc aagcccacct gagcacagcc agccccagcc ctgccccctc 45300
acttcctcct gggagccacc tggggtctcc attcctggag ctccctgcct ggatccaggt 45360
gtgagggcca ggtggccacc cagagggagg gctgtatgat tctgggcaac atccccaaat 45420
ggacagggca gggcatctcc aagatgctac ttcccacgga ctctcagaag aactgctaaa 45480
ctgtccctct gtcagggcag agaccaagtc cctcacggtc accagtgtgt gaccgtgggc 45540
ctggcacaca ggaggccctc aactgttgaa ccagtgggtg aataacaggg tctctaggac 45600
agtagggtgt gaggcagaaa acccatctat gctcacctga ctctatgagg cagtggttta 45660
caagttcaga gtatttacta tgagcagggc atagtgagtc ccagggtcaa aggccaccca 45720
gcccctgccc ccggcaggac ttgaggaggg agaagtgggg caccttccat ctgcagtggg 45780
gttgggaggg cttctagagg aggtggagtt tgaatggact tgagcaggat tgggtggggc 45840
taccacaggc aggaggagca atgccaataa ggaggggccc aggcaggggc tgaagggacc 45900
tcagcagggg agccccccct cccgcccttg ccatcacgtg caggagctca ggtgggaaga 45960
gcaagacagc actgggctgg ggtctctgag tgaggggctg ggagttgagg tgttatcctg 46020
gttctacaag gacaacctgg cactttctaa gcggggagta acgcacgcag gtctgtgctc 46080
caggagggtt cagtggcgtg ggtgggttgt gacagctgat tttcatgagc acttacccag 46140
tgccaggcag agtgatgcgt gttaaacaca ctctgtcacc acatttaaca gttgagaaaa 46200
ctgatgcaca gagaggttgg gctacttgcc caaggtcacc cagctagtaa gtggcagagc 46260
tgatatttgc acccaggcac tctagctcca taacccgtaa ttttcatcag ggtatgatgg 46320
tactacagag gtgccagggg ccacagcggg accctctagg accggtgccc caaggtcaca 46380
gctggaccct ctaggaccgg tgccccaagg tcacagctaa gtctggcttc cccaggtggt 46440
gagaagacat cagtggccat ctcggtgctc ctggctcagt ctgtcttcct gctgctcatc 46500
tccaagcgtc tgcctgccac atccatggcc atccccctta tcggcaagtg agtaacgctc 46560
aagcccggcc tcaccctgct tgccagccca gccctgggag ctccaagctg agtgtttgcc 46620
cacaggttcc tgctcttcgg catggtgctg gtcaccatgg ttgtggtgat ctgtgtcatc 46680
gtgctcaaca tccacttccg aacacccagc acccatgtgc tgtctgaggg ggtcaagaag 46740
gtgagtactt ggcccggcgc aaaagctcac cactgtaatc ctggcatttc aggaggctga 46800
ggcgggagaa tctcttgagc ccaggagttg gagaccagcc tgggcaacat agagacaccc 46860
ctgtctctat aaacaatcaa aaaaattagc caagtgtggt ggcgcatgct tgtattccca 46920
gctactcaag aggctgaggt ggatcacttg agcctgggag gtcaaagctg cagtgagctg 46980
tgatcgcgcc agggcactcc agcctgggca acagagtgag accttgtctc aaaaaaaaaa 47040
aaaaaaaaaa aaaaaaagaa atgaccactc tcaatagcca aaacctggaa actaacccag 47100
gtacagtggc tcacacctgg agtctcagct actcgggagg ctgaggtggg aggatccctg 47160
gaacccagga gttggaggtt gcaatgtact atgatcacag ttgcacccca gtctgggcaa 47220
```

caaatcaaaa ccccatctct aaaaaaataa aataaaatga aaagcaggga ccgggtgtgg 47280
tagctcacac ctataatccc agcactttgg gtggctgagg cgggtggatc acctgaggtc 47340
aagagttcga gaccaccctg gccaacatgg tgaaactcca tctctactaa aaattcaaaa 47400
attagccagg cgtgatagtg tgcgcttgta atcccagcta ctcgggggggc tgaggtacga 47460
gaatcgcttg aactcgggag gtggaggttg cagtgagccg agatctcacc actgcactcc 47520
agcctgggcg acaagagaca agagcgaaac tctgtttcca aaaaaaaaaa aaaaaaaaaa 47580
aaatctggaa cttgtccaaa ggccatctgt agaatgggta aagacactgg acatatactc 47640
ccacgggagt gccgctcagc cgtgcagaag cacctgcggc tgctgcagcc ctgcacgtgt 47700
gaacctcctg gcacagtgtt ccgtgaaaga aaccagacgc agcagcacat gctgcaggcc 47760
tcactttgta agaagttcaa gaacaggcca aatcagtgtt tggtgatgga agtcagaatg 47820
gtggctatct ctggggctgg gagggtactg agtgggggca ggtgtgaggg agatttttgg 47880
ggatcatgtt cactatctca tcactggtga tttacccagt ggaatgcatc tgtaaaaatt 47940
catctagcta tatacttaag atgtgctcat tccactgtat gctgcaactc agaaggaaga 48000
aggggaggac tgagtgcagg gtgctcagga gggggctgcc cttgcctctc ggctgctgca 48060
gggccggctg gctgttctgg gacagctgaa ggcagtttag caactctttt ttttcttttt 48120
tgagatggag tctccctctg tcgcccaggc tggagtgcag tggttcgatc tcagctcact 48180
gcaacctctg cctcccaggt tcaagtgatt ttcatgcctc agcctcctaa gtagctggga 48240
ttacaggcgc ccgccaccat gcctggctaa tttttgtatt tttagtagcg atgggtttca 48300
ccacgttggc catgctggtc tcgaactcct gacctcaagc aatccacctg cctcggcttc 48360
ccaaagagct gggactatag gcgtgagcca ctgtgcccgg ccttagcaac tctttttgtc 48420
tttcagcatt tgatggggga gactctagca tttggagcat ttaccttagt ttttggtctt 48480
taattaatca tttttagtga atgggttctg ctccgcacca tgggtgatgt gggagagctg 48540
gaagcaacct gcatgtgcat cagtaggaga tcggggaatc aatgacagag tcagacgggg 48600
gagcactttg tggcagccag gaatgaagtc acagatgtta ggatgtgtaa aggtcacccc 48660
atgcttgtaa aatggccttt ttggccagac acggtgcctc gcccgtaatc ccagcacttt 48720
gggaggccaa gtcaggcaga tcacgaggtc aggagagcaa gaccatcctg gccaaaatgg 48780
tgaaacccca tctctactaa aaatacaaaa attagctggg catggtggcg cgtgcctgta 48840
gtcccaacta cttgggagac tgaggcaaga aatcacttga acccgagagg tggaggttgc 48900
agtgagccga gatcgcgcca ctgcactcca gcctggtgac agaatgagac tccgtctcaa 48960
aaacaaagaa caaaaaacaa cgcctttctt gtggcccctt gacatggccc cagctcttcc 49020
tggagaccct gccggagctc ctgcacatgt cccgcccagc agaggatgga cccagccctg 49080
gggccctggt gcggaggagc agctccctgg gatacatctc caaggccgag gagtacttcc 49140
tgctcaagtc ccgcagtgac ctcatgttcg agaagcagtc agagcggcat gggctggcca 49200
ggcgcctcac cactgcacgt gggtccccgc tggtcttggt tttcagccca tctgtgggag 49260
gtgggtggag gcaggcctca cacccactct ggccccttgt ctgtaggccg gcccccagca 49320
agctctgagc aggcccagca ggaactcttc aatgagctga agccagctgt ggatggggca 49380
aacttcattg ttaaccacat gagggaccag aacaattaca atgaggtaag ggaccacagg 49440
attgccatgt acaggtgttc aagtagggca ctgattaagt gtattctatc ttaagagggc 49500
agggttcccc ttagaggcac acaccaactt agatgaggga gttaatgtga cacagattcc 49560
aggcccccgc gccagggaga gagaactcct gcctggcacc ctatagcagc actggggcca 49620
ggcacacaca cataggcaca cagctccacc ctgtccaggc cacactctga gcatccctta 49680
ggatcccttc tttctcccag ctgccaatca ttttctgtcc ctactcagtt ccaagcctga 49740
tactccagac agaaccagac attttaaagg tagccatata tggttattca acattataca 49800
acttctaaaa actatctctt gagaaagggc acctttcccc agttcacata tgggctggca 49860
gcagccctga cttgctgaga tgggggagaa gaagagaggg gtctatccac cttcctcagc 49920
ccctaggaga gacccctggg cctcagttcc tctctagccc cagagccctg tgctacagca 49980
gagagggagg ctatggtct 49999

<210> 21
<211> 11849
<212> DNA
<213> Homo sapiens

<400> 21
gttcccgcct cctcaacaga gtgatcagcc ctgcctgtgg ccagaggggc ctgggacctt 60
gctggggaca agccagcatt atcctgcaag cccgaggcag cctctgcagg cacaatgagc 120
cgccctctgc ctccatggct gggccccagc ttgggggtgg ggctttgtgg cctgaggccc 180
ttctcacccc actctctctg cccctaccca caggagaaag acagctggaa ccgagtggcc 240
cgcacagtgg accgcctctg cctgtttgtg gtgacgcctg tcatggtggt gggcacagcc 300
tggatcttcc tgcagggcgt ttacaaccag ccaccacccc agccttttcc tggggacccc 360
tactcctaca acgtgcagga caagcgcttc atctagggtg ggcctgttgg ggagccagga 420
gacagcaggg tctgagagag gagccacagt ccctaatgac acccactcct agccctgagg 480

ctcgtgcccc tcagactggg gaagagtcca aggaagggag ggagcagcca ctcctcaatg 540
ctcaatggct cccctgaaat caagacaggg gccacccgag atggtctgag ggtggacatc 600
ggctacagtg ggtgggcagg acgatttggg gggaggcccg aggctggctc aggggccagg 660
gaggaggcca ctcagggtgg cctcaggggg agagctctga taggggtgag acagataggg 720
ccccttctat gattctcctc ccccaaggtg tggggtagag caggcaggaa tctgcgcctt 780
cactctctgg cccctccagc ctccctcttc ctacctaccc ttcaacctca ggcttctgag 840
gcctcacctg ggactgaggt tgaggacacc tccctccctc cagaccccag agtatccttt 900
cctagctctt tctgccttga cctctctgcc taggtccctt tgggaagttg aggactggag 960
tggaaaggtc aggatcgaca tccacaaaga cttggggtca gcctgaggtt gcacacacaa 1020
tcctagagga ccagaacgca gcacctctcc ccaaagggtc cctgcccccc agcacctact 1080
cctctccaaa ttagggttgt catgcattat ttggggcata catattctaa aaaatcattc 1140
gttgtttctc tgaaatttgt cccctatttt tatttgctaa atctagcaac cctatcccaa 1200
aggcagcctc cactcaatct tatcctgagg gccaaaggcc aaggctgcag gaattgggag 1260
acaagggtct gtttgtatgg tggtccacct ccaagatggc cccagtgatg cccagtattc 1320
acacccttgt gcagtcccct cactctgtac cagggtgggt ctgggtaacc aatagaatga 1380
ggcagaagtg atggtacctc acttcccaga tttggttagg aaagacacta tggcctcttt 1440
cttgctcatt agccctcatt ctcacatcag ttggatctct cactttgggg aagccagctg 1500
gcatgttaag gagccctatg gagaggccca catggcaagg aactaaggcc tcctgccaac 1560
agccacgtga gtgaatgtgg aagtggatcc tctgccccag tagggccttc ggatgagatc 1620
acagcccagt agacatctta tgtgcagccc catgaaagtc cctaagccag aaccaccagc 1680
taagtgactc ctggattcct gacccccaga aactgtgtga gataataaat gtgtgttgtt 1740
ttaagtgaca acgttttggt gtcatttgtt acaccagcaa tgtgaccttg agtgagctgc 1800
tcctcatctc actcctcacc ttccatcttc taatctgcaa aatgtgtgtc tagtaagtcc 1860
tagtcatggg gtgttgtgaa aattgaattt ctagtaggag cattttcatg tgacctgcac 1920
atttaatggg tggtgattta acccatttcc ctcaggggg aattggtgac ctcattaact 1980
cagatataca gaaggtgaga tttttaatgt ttagatgtaa ccaaggaaaa agaaaaacca 2040
tttaaaacca aaactgaccc tagtaacttc tgccttccag catgaactat tcacaaaatt 2100
caaggtacaa atctttaatt gtcctgtcta aataggaaag ccagtttgtt ctcacacctg 2160
tcaggtgagc aggaaatctg agacttcccc aggaatagcc catcaactca gggagggtcc 2220
gtcttgtgca cagagagtct agggccctca gccacagtct ttgcttctct ctgcctcatg 2280
gtggcgctgc tggcagcagg tcttggttca accaccaggt gagtcctcag ttctattagg 2340
ccctgctcaa gtggctgtgg acttccagag aagacaaccc caaaatgtca cacaaaaccg 2400
gggggtgcc tcctgcacag gctcccaggg tcaccacagt ttccaccaga ggcacccact 2460
cccccagcac ggtggtgctg tcaggactgg tccactctga ctgacataga actccatctt 2520
ctgtccccag gaagccatgc tcacaggcac agctttccgg gaagccagag agtgttcctt 2580
actctctcca gaccaacagg gctaccctct ctctttcaat ggacagtgaa tcagtaatac 2640
actggcctgc aaggaacaga aagctgaagg aattgtagct taaacacata aggtttcctt 2700
tttctcacat agtaataata gggaggcgga ggtgatcatg ttggctcggc tgtctaacaa 2760
agctatcagg gacccaggca ttttgccatc tgcccagccc tgcctccatg gcaagttggc 2820
ttctgtcctc agacctgttg gccccagttt gtgagctgac agccacagct gcacacttag 2880
cacctatgtt caggcagaaa agggccagcc atttctgacc cctttcatca agaagcaaaa 2940
cttttccata ggccgggcac agtggctcac gcctgtaatc acagcacttt gggaggctga 3000
ggcggctgga tcacctaagg tcaagagttc aagaccagcc tgacgaacat ggtgaaaccc 3060
cctctctact aaaaatacaa aaattagatg ggcttggtgg cgcccgcctg taatcccagc 3120
tactcaggcg gctgaggcaa gagaatcgct tgaacccagg aggcagaggt tgcagtgagc 3180
cgagatcaag tcattgtact ccagccttgg cgacaagagt gaaactccaa ctcaaagaaa 3240
aaaaaaaaaa caacttttcc ataaagctcc agtagacatc ccgcaggtca aaacatcaca 3300
tggctagcct atctgaaggg agactaggaa atgagtatct tgctctacca gccattataa 3360
cagagggtgg caaaggagaa gtagtgttag acaattctac agatgatttt ctctgaatgg 3420
gtcctgtccc tgcacacgta acccctgcaa gaaacttcca ttcctcattg atgatttacc 3480
cttcggagaa caccaagaag gcttctaggc catctctccc agagcagaga aagggagaaa 3540
acaggagggt ggagggtagg ggatgcaggg acaggtggtc cactgtttgg cagtgcttcc 3600
tgatcatgga ggccattgaa tttggtaaaa tgtgggcatg gaggagagta aagaggtgga 3660
gagaaactgg tctgcaaaag aggataagaa aactgcatct agggggacca gagggcaaaa 3720
tggaaaggca aggctctcag aagtgagaag gaaacgaggg ctttgtaaat tccaggaaaa 3780
gtgggccaca cagagagaag ctcagtgggg gggatgccca gggaggggga agctcaggaa 3840
gggggaagct cagggaggag gaagctcaga gaggaggaag ctcagggaaa gggaagccca 3900
gtgaggggga agcttaggga gggagaagct cagggagggg gaagctctgg gaggaggaag 3960
ctcagggaaa gggaagccca gtgaggggga aggtcagcga gggggaattt cagggagagg 4020
gatgctgagt gaggggatg ccgagtgagg ggaggccgag tgaggggatg cccagtgagg 4080
gggatgccca gtggcaggcc aagatgggtg gatcacttga gttcaggagt tccaagactg 4140
gcctggccaa catggtgaaa ccccgtctct actaaaaata caaaaaagaa aaaagaagaa 4200
gaagaagaaa aattagccag gcgtgttggc gcatgccagt agtcccagct actcagaagg 4260

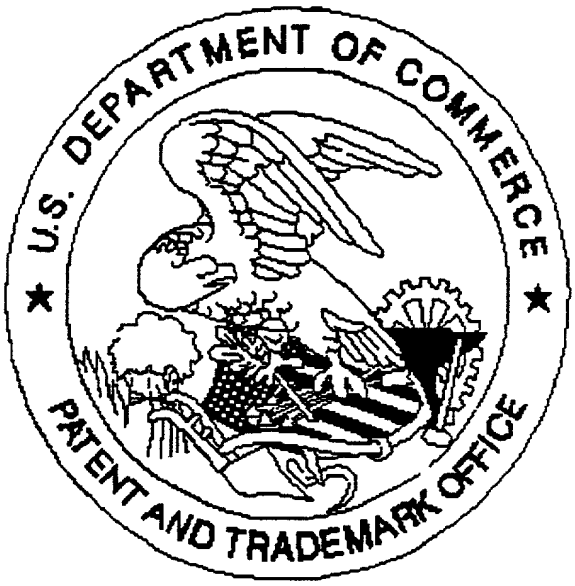
ctgaagtaga agaatcaagg tggaggttgt agtgagccaa gatcgcacca ctgcactcca 4320
gcaaaaaaca aacaaacaaa caaacacaaa aaccctcaca tgcctaccca acagccttca 4380
cacccaccca aatcctgact ccctggaggg agtaggaggc agtccacctc agccctctct 4440
ggagccgctg tcaggttcct cggcgacctg ccttccctac cacacccagc tggccctggc 4500
tgtccttgcc ccccatgtgg aacatggagg tgaggctggg acaactgagc ccgagttggg 4560
gctggaaggt ggatgtctct tttggggcag acggggcccc tgtctccccc ctccagccca 4620
ggtaacctga gcccagcatt gtgtccatcc tggaacagct gacaacgctg tggtcagaca 4680
gctggtgggg ctgggccagg ctggccgggc tggctgggct ggctggggtg ggagtgtagg 4740
ctgttatatg acacccagag cccatctctc tctgccccag accttggagc tgttgtccca 4800
cccctgtcac tgcagagagc tgaggcacca tgcatggggg ccaggggccg ctgctcctcc 4860
tgctgctgct ggctgtctgc ctgggtggga cacaaaggaa tctcagcctg gggagtccca 4920
gagctggggt ccacagcctc aggggatgga gggtctgagg ggtattgggg cctgccctgg 4980
acccagttcc ctgagtcccc acttcacacc cccagggcct ccccgctctt tccacctcca 5040
agctcctgct aggctcacgc ctgtctattg caggggccca gggccggaac caggaggagc 5100
gtctgctcgc agacctgatg caaaactacg accccaacct gcggcccgcg gaacgagact 5160
cggatgtggt caatgtcagc ctgaagctaa ccctcaccaa cctcatctcc ctggtaagcc 5220
gcaggacgga ggaggggtca gcgcaccacg ccctgggacc tgctggggat agcatggggt 5280
ggctccagcc accaagaggt tggagggccc taaatcggac aggctggggt ctggaaaacc 5340
cccatggttg tgggggagt actatcaaga ggctggggga tgcttggccc cattggtggc 5400
ctgtggggac tggcactgaa gtcgggggct gagccctcca tactacaccc ttgcaccccc 5460
agaacgagcg agaggaagcc ctcaccacca atgtctggat agagatggta agaggccacc 5520
ctgccaccct ccttccatca ggggtcccac cccaccaccc caaggcctcc tgagagttgc 5580
ctgccccgtt cctgcctctt ctgtcctctt gggctggatg cccactccta gggctgtggt 5640
gcagcagagg gcagaggcct atcaactgcc cctccccctg cagcagtggt gcgactatcg 5700
cctgcgctgg gatccgcgag actacgaagg cctgtgggtg ctgagggtgc cgtccaccat 5760
ggtgtggcgg ccggatatcg tgctggagaa caagtgagga gggggtgcag gcaggggtgt 5820
gggggacaaa ggacacaggg tctgggccca gcagaacaag gcactctggg aaaagagaaa 5880
gatgagcaga gggtgcaaat cgggcacctg tggggctagg gaagaactgg atggagcagg 5940
tgccgagggc agggccctgg gtatgccctc tgaccccagg gccagcagag cagaccctac 6000
gccaggctcc atctcctctg ggctgggcca cctgggtggg ctgctccctt ccctgtaaca 6060
tggggccgct gacgggtcct atagaagctg gcgagagtca acaagacagg catgaaaagt 6120
gcatcactcg ggggctggca catggtgtgg gcttaacaca ttagtcgcta ttatgactat 6180
tattattatt atgattaaaa caagagagag taagataagc agaaattagg aggtggtgcc 6240
tgaggaagtc tgtctggggc ggggggtggc aggaggattg ctgggggggac ctagtggtcc 6300
gggtgggaac cagtcagggg gtgacaggct ggtagggact ggtgtcccca ggcccctatc 6360
cacatggggc acaggggctg gtatggggct ggggtgtcgg gggctgagcc cacagcatcg 6420
tggcatggcc tgttctgtgc atacagcgtg gacggtgtct tcgaggtggc cctctactgc 6480
aatgtgctcg tgtcccctga cggctgtatc tactggctgc cgcctgccat cttccgttcc 6540
gcctgctcta tctcagtcac ctacttcccc ttcgactggc agaactgctc ccttatcttc 6600
cagtgaggcc atttattggg gaggattaag agagctgctc tcagaggggc ctgggcagtg 6660
gtggggtaag gcctgggcaa ggcttctggc cttggctctg gcagcaccta gaggcctggc 6720
tccatctccc ctgggcctct gtgcccatct caggctaaga cacctgaagg tgcccaagct 6780
ctccctgcta agcccgagtc ccctcactca tcctttactg cctcagtttc ctcacctgtg 6840
ctccaagggg agacattcac gcctggggtg cgtgggtgag aaggcacaca tgcacacaag 6900
atgcgtgtct gcgcacacac gaaaccactg cacactccag gcccacaggg aggcagggct 6960
gtcctgtgag agaggggccc tggcagggaa tccagcggaa gcatgtatgc aaccaagcca 7020
cccctggggg tctctgggtc tgtttcctca aacctaagtg tggggaggag ggcccggggg 7080
agggttctcc tgtaccttag aggagcagtc tttccatgag caaacctggc agggagactc 7140
ccctctgtag acatgggggt cctcctcggg taggcatgtg ttttctacat tgccatcatc 7200
agcccctcct gccagacagc agtgggagag acaaatgcag agtgaccctg ggcccatcag 7260
ccaggtgagg gccctgcagc ctcctgggcc ttcaactcca tcttcctgac cccaaagagc 7320
cctaggtcct cctgctctcc atatctcgcc agtggggttt gatagagaac tcagaagcgt 7380
ggggctgcat tttgttgaag aaaagctgcc cacacttgtc cccagaaggt catccccatg 7440
cagtcgtggc aggtccaccc gctcacattt agcctctttc cttggtgact cccaggtccc 7500
agacttacag caccaatgag attgatctgc agctgagtca ggaagatggc cagaccatcg 7560
agtggatttt cattgaccct gaggccttca caggtaaccc ccacccaagg gctccccagg 7620
cagcctcatc cagggctcct gctggaccca gctgtggtca aggctggacc aaggtcaaat 7680
ccctcccatg taactcaaaa tgaaaactac agcaaaccat aaaatatgct ttttaaaacg 7740
tccaacaaag ctctgacttt cctcatgata atgtctccaa ttttagaaga ggctcgagca 7800
tccaatctcc caccccactt ctgtccctca agggtgcctc ccctgctggt gctccttagg 7860
gcacatgctg cccttgcacc tgggtcactc ggctgcaggg atctgcctag ctcacgcttc 7920
ttgtgcccac tcctgcctgc ctgcctgccc gcagagaatg gggagtgggc catccagcac 7980
cgaccagcca agatgctcct ggacccagcg gcgccagccc aggaagcagg ccaccagaag 8040

gtggtgttct acctgctcat ccagcgcaag cccctcttct acgtcatcaa catcatcgcc 8100
ccctgtgtgc tcatctcctc tgtcgccatc ctcatccact tccttcctgc caagggtacc 8160
tggagcctat gggaaggagc catccagtag cacaggggac acctgggagg ccggggtggg 8220
ccctgcctgg ggaacagagt ggcattacga cccaggacag aggcagcggg ctacttctgg 8280
ggtaaggggt tcctctgtgg gtgggggagg taggaacctg ctctgagagc ctctcggtca 8340
tggatagctg ggggccagaa gtgtaccgtc gccatcaacg tgctcctggc ccagactgtc 8400
ttcctcttcc ttgtggccaa gaaggtgcct gaaacctccc aggcggtgcc actcatcagc 8460
aagtaaggct ggtcttcatg tccacccgcc tatgccactc tcccttcttg ggagcatgat 8520
ggcctcctgc attgccctct tgccctccat ccacccccca catcctcaat tcaggaggcc 8580
tgaggggggc agccactaag ggtgggggtg gcatcatggt atgggctgcc agctcctgcc 8640
caccccaccc tgacaggtac ctgaccttcc tcctggtggt gaccatcctc attgtcgtga 8700
atgctgtggt tgtgctcaat gtctccttgc ggtctccaca cacacactcc atggcccgag 8760
gggtccgcaa ggcaaggacc ctccctgccc acttcaacat cccgctgccc actcccctac 8820
gcctccctct cgcacgcccc ggcagtactc acctgtggca ttccacagca cacccatcct 8880
gggcgtatct ggacgcatgg accaaaatcg attacagtaa tacaggaatg aaattgcttc 8940
ctaggtgccc gggatattac aaatgttaat gtatttcatc ttcataaaac ccatatcacc 9000
tccaattaca gatgaggacg ttgaggcgca gagaggttaa gtaacctgcc caaggaagtg 9060
cactacaaag tcgaaaaagc aggagtctgc cagggcagtc tgattccagt ctgtgtgatc 9120
tgtagcccac ctgcagcctt cagcttgggc ccttgttgca catgcagatt cccaggcctg 9180
tcccaggcat tctaggccag aatagcatga gggctggggg caggaatctg tgtttataac 9240
aagtgccctg gtgattctga tgtgcactga agtttgggga cccaggctcg tgtccagtat 9300
agaaagcttt accaaggcca cgtcactgcc ccggtatgct gcctccatgg tccctagcag 9360
cacaagccct tcacaccaac ctctggcttc tgctctgaag ctcggcctgc tgccctagtg 9420
aagccacccc ctctctaggt gttcctgagg ctcttgcccc agctgctgag gatgcacgtt 9480
cgcccgctgg ccccggcagc tgtgcaggac acccagtccc ggctacagaa tggctcctcg 9540
ggatggtcga tcacaactgg ggaggaggtg gccctctgcc tgcctcgcag tgaactcctc 9600
ttccagcagt ggcagcggca agggctggtg gcggcagcgc tggagaagct aggtgagaca 9660
caccaggtgt gcctggggac agtcctcccc tgggacccca gctggggagc caggcacagc 9720
agatgagtgc tggagaagtg cccaggtcag ggagagagga gctggggtcc ctaaggagag 9780
gccatcttct ctgcctgttt ctcctccatt ctactcccaa accttaccct ttctctttat 9840
cagagaaagg cccggagtta gggctgagcc agttctgtgg cagcctgaag caggctgccc 9900
cagccatcca ggcctgtgtg gaagcctgca acctcattgc ctgtgcccgg caccagcaga 9960
gtcactttga caatgtaagc tgagtcaggg tggggtggag gtggagtgag tacctgggct 10020
tggaaccgtg atagagacag gatgagtggg gttgccaaga tagggcagtg ggatggaaaa 10080
acatgaggcc gggtgcagtg ggtcacacct gtaatcccag tactttggga ggccgaggcg 10140
agtggatcac ctgaggtcag gagtttgaga ccagcctggc caacatggca aaaccctatc 10200
tttaccaaaa ataccaaaaa taccaaaaat tagctgggtg tggtggcggg cacctgtatt 10260
cccagctact caggaggctg aggcaggaga attgcttgaa cctgggaggc ggaggttgca 10320
gtgagccaag ccaagatcgc accactgcac tctggcctgg gtgaaagagt gagacgtgag 10380
actccgtctc aaaaaaaaaa aaaaggaaag aaagaaagaa aaaggaacag gggcaggggg 10440
ggcacctcag ggccaggggg ccatggaatt agccaccagt tgggacccgg acataggtaa 10500
gaagggcccc aggaaatgga gacatgggcc tgctggaagc ccaaggatga gaacaggacc 10560
cagggaagac ctggtgccgc cgctggttat cccacacctg cctcccaccc tcaggggaat 10620
gaggagtggt tcctggtggg ccgagtgctg gaccgcgtct gcttcctggc catgctctcg 10680
ctcttcatct gtggcacagc tggcatcttc ctcatggccc actacaaccg ggtgccggcc 10740
ctgccattcc ctggagatcc acgcccctac ctgccctcac cagactgagc caaccaacca 10800
ctgtggggca tgtgggagtc acacacgtgg gtcacactga gtcttatcag ccacgttctc 10860
ctactgaggt cctaagtgtg ctctttggga agtgcccttc aggactgtgt gagccaaaca 10920
gccctgagaa aagctgggga aacagtctga gctggagtcc gagagtggtt gggggtgggc 10980
cgtggctagt gtcctgctgc agtcagcaca cacgtgggat tggctagctc atcctggcac 11040
cagccacccc tccactcagt gcactccctt cacttaggca aagcattatt cattcccatc 11100
agtctgaagc ccgaaggact gttttgtata ataccttcgg acttgggact ggctcccctt 11160
ttacaagttc tccctgaaag agggcagtca caagaggtgt gaagagtagc agccgatgct 11220
ctctccaaag cagggcagca gcccatacca gctggcatct ccccccccgtg ccttctgggt 11280
acaataagca cccaatttтc aacagcccca gtggcctttc cattcatgtg catttttctg 11340
ccactgacca caagacgatt tcctgagttt tgtaatcctc ttttttttтt ttttttttтt 11400
agtttttgat gtgttgttgt tgttttgttt agttttgaga tagagcctca ctcttgtcat 11460
gcaagttgga gtggagtggc atgatcatgg ctcactgcag cctcaacctc cagggctcaa 11520
gcaatgctcc tgcctcagcc tcccaagtag ctggcaccac aggcatgcac cactacaccc 11580
agctactttt aaatttttag tagagatgag gttttgctat gttgcctagg ttggtcttga 11640
actcctgagc tcaagtgatc ctcccacttg agtcttggga ttacaggcat aagccactgt 11700
acctggcctc ctttttaatt aagagctcct cacagcagta tggataagca agagtcatta 11760
ttccccatgt tatataggca aattgagcct agagtaagcg ggactccaca caacagtggt 11820

ggttaaacaa ggtttgaagt ccagaattc 11849

United States Patent & Trademark Office

Office of Initial Patent Examination -- Scanning Division



Application deficiencies found during scanning:

☐ Page(s)_____of_____ were not present for scanning. (Document title)

☐ Page(s)_____of_____were not present for scanning. (Document title)

☑ ***Scanned copy is best available.*** Figures 1, 3, 4, 5, 7, 8, 10 are dark